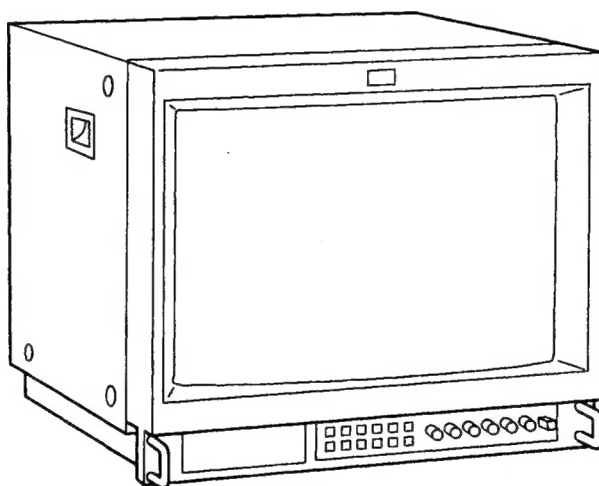


# SERVICE MANUAL

MODEL	DEST.	CHASSIS NO.	MODEL	DEST.	CHASSIS NO.
PVM-20M2U	US	SCC-G61H-A	PVM-20M4E	AEP	SCC-G62E-A
PVM-20M4U	US	SCC-G61F-A	PVM-20M4A	Australian	SCC-N17C-A
PVM-20M2E	AEP	SCC-G62GA			



**Trinitron**

PVM-20M4U/20M4E

**Trinitron**

PVM-20M2U/20M2E

**TRINITRON® COLOR VIDEO MONITOR**

**SONY®**



## SPECIFICATIONS

### Video signal

For PVM-14M4U/14M4E/20M4U/20M4E:

Color system	NTSC, PAL, SECAM, NTSC <sup>4.43</sup>
Resolution	800 TV lines
Aperture correction	0 dB to +6 dB
Frequency response	
LINE	10 MHz $\pm$ 3 dB (Y signal)
RGB	10 MHz $\pm$ 3 dB
Synchronization	AFC time constant 1.0 msec.

For PVM-14M2U/14M2E/20M2U/20M2E:

Color system	NTSC, PAL, SECAM, NTSC <sup>4.43</sup>
Resolution	600 TV lines
Aperture correction	0 dB to +6 dB
Frequency response	
LINE	10 MHz $\pm$ 3 dB (Y signal)
RGB	10 MHz $\pm$ 3 dB
Synchronization	AFC time constant 1.0 msec.

### Picture performance

For PVM-14M4U/14M4E/14M2U/14M2E:

Normal scan	7 % over scan of CRT effective screen area
Under scan	5 % underscan of CRT effective screen area
H. linearity	Less than 4.0 % (typical)
V. linearity	Less than 4.0 % (typical)
Convergence	
Central area:	0.4 mm (typical)
Peripheral area:	0.5 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.5 %
Color temperature	D65/D93, selectable USER (3,200K–10,000K, factory setting is D65)

For PVM-20M4U/20M4E:

Normal scan	7 % over scan of CRT effective screen area
Under scan	5 % underscan of CRT effective screen area
H. linearity	Less than 5.0 % (typical)
V. linearity	Less than 5.0 % (typical)
Convergence	
Central area:	0.5 mm (typical)
Peripheral area:	0.7 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	4.0 %
Color temperature	D65/D93, selectable USER (3,200K–10,000K, factory setting is D65)

For PVM-20M2U/20M2E

Normal scan	7 % over scan of CRT effective screen area
Under scan	5 % underscan of CRT effective screen area
H. linearity	Less than 5.0 % (typical)
V. linearity	Less than 5.0 % (typical)
Convergence	
Central area:	0.6 mm (typical)
Peripheral area:	1.0 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	4.0 %
Color temperature	D65/D93, selectable USER (3,200K–10,000K, factory setting is D65)

### Inputs

For PVM-14M4U/14M4E/20M4U/20M4E:

LINE A/B	
VIDEO IN	BNC connector (x2), 1 Vp-p $\pm$ 6 dB, sync negative Automatic 75 ohms termination
AUDIO IN	Phono jack (x2), -5 dBu <sup>a)</sup> , more than 47 kilo-ohms
LINE C	
Y/C IN	4-pin mini-DIN (x1) See the pin assignment on page 19.
AUDIO IN	Phono jack (x1), -5 dBu <sup>a)</sup> , more than 47 kilo-ohms
RGB/COMPONENT	
R/R-Y, G/Y, B/B-Y IN:	BNC connector (x3) R, G, B channels: 0.7 Vp-p, $\pm$ 6 dB Sync on green: 0.3 Vp-p, negative
R-Y, B-Y channels:	0.7 Vp-p, $\pm$ 6 dB
Y channel:	0.7 Vp-p, $\pm$ 6 dB (Standard color bar signal of 75% chrominance)
Automatic 75 ohms termination	
AUDIO IN	Phono jack (x1), -5 dBu <sup>a)</sup> , more than 47 kilo-ohms
EXT SYNC IN	BNC connector (x1) 4 Vp-p, $\pm$ 6 dB, sync negative
REMOTE	20-pin connector (x1) See the pin assignment on page 19.

a) 0 dBu = 0.775 Vr.m.s.



For PVM-14M2U/14M2E/20M2U/20M2E:

#### LINE A/B

VIDEO IN	BNC connector (x2), 1 Vp-p ± 6dB, sync negative Automatic 75 ohms termination
AUDIO IN	Phono jack (x2), -5 dBu <sup>a)</sup> , more than 47 kilo-ohms

#### LINE C

Y/C IN	4-pin mini-DIN (x1) See the pin assignment on page 19.
AUDIO IN	Phono jack (x1), -5 dBu <sup>a)</sup> , more than 47 kilo-ohms

#### RGB/COMPONENT

R/R-Y, G/Y, B/B-Y IN:	BNC connector (x3) R, G, B channels: 0.7 Vp-p ± 6dB Sync on green: 0.3 Vp-p negative R-Y, B-Y channel: 0.7 Vp-p ± 6dB Y channel: 0.7 Vp-p ± 6dB (Standard color bar signal of 75% chrominance)
-----------------------	--

AUDIO IN	Automatic 75 ohms termination Phono jack (x1), -5 dBu <sup>a)</sup> , more than 47 kilo-ohms
----------	--

EXT SYNC IN	BNC connector (x1) 4 Vp-p, ±6 dB, sync negative
-------------	--

REMOTE	20-pin connector (x1) See the pin assignment on page 19.
--------	---

a) 0 dBu = 0.775 Vr.m.s.

### Outputs (common to all models)

#### LINE A/B

VIDEO OUT	BNC connector (x2) loop-through, Automatic 75 ohms termination
AUDIO OUT	Phono jack (x2) loop-through

#### LINE C

Y/C OUT	4-pin mini-DIN (x1) loop-through, Automatic 75 ohms termination
AUDIO OUT	Phono jack (x1) loop-through

#### RGB/COMPONENT

R/R-Y, G/Y, B/B-Y OUT:	BNC connector (x3) loop-through Automatic 75 ohms termination
------------------------	---

AUDIO OUT	Phono jack (x1) loop-through
-----------	------------------------------

EXT SYNC OUT	BNC connector (x1) Automatic 75 ohms termination
--------------	---

Speaker output	Output level: 0.8 W
----------------	---------------------

### General

For PVM-14M4U:

CRT	SMPTE-C phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	120 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	-10 to +40°C (14 to 104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13 <sup>5</sup> / <sub>8</sub> × 13 <sup>1</sup> / <sub>2</sub> × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-14M4E:

CRT	EBU phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	100 to 240 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	-10 to +40°C (14 to 104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13 <sup>5</sup> / <sub>8</sub> × 13 <sup>1</sup> / <sub>2</sub> × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-14M2U:

CRT	P-22 phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	120 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	-10 to +40°C (14 to 104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13 <sup>5</sup> / <sub>8</sub> × 13 <sup>1</sup> / <sub>2</sub> × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)



**For PVM-14M2E:**

CRT P-22 phosphor  
Power consumption 90 Wh (with SDI: 99 Wh)  
Power requirements 100 to 240 V AC, 50/60Hz  
Operating temperature 0 to +35°C (32 to 95°F)  
Storage temperature -10 to +40°C (14 to 104°F)  
Operating humidity 35 to 85% (no condensation)  
Storage humidity 0 to 90%  
Dimensions (w/h/d) Approx. 346 × 340 × 431 mm  
(13<sup>5</sup>/<sub>8</sub> × 13<sup>1</sup>/<sub>2</sub> × 17 inches)  
not incl. projecting parts and controls  
Mass Approx. 16.7kg (36 lb 13 oz)  
Accessory supplied AC power cord (1)  
AC plug holder (1)  
Tally label (1)  
Cable with a 20-pin connector (1)

**For PVM-20M4U:**

CRT SMPTE-C phosphor  
Power consumption 125 Wh (with SDI: 135 Wh)  
Power requirements 120 V AC, 50/60Hz  
Operating temperature 0 to +35°C (32 to 95°F)  
Storage temperature -10 to +40°C (14 to 104°F)  
Operating humidity 35 to 85% (no condensation)  
Storage humidity 0 to 90%  
Dimensions (w/h/d) Approx. 450 × 458 × 503 mm  
(17<sup>3</sup>/<sub>4</sub> × 18<sup>1</sup>/<sub>8</sub> × 19<sup>7</sup>/<sub>8</sub> inches)  
not incl. projecting parts and controls  
Mass Approx. 30.0 kg (66 lb 2 oz)  
Accessory supplied AC power cord (1)  
AC plug holder (1)  
Tally label (1)  
Cable with a 20-pin connector (1)

**For PVM-20M4E:**

CRT EBU phosphor  
Power consumption 130 Wh (with SDI: 140 Wh)  
Power requirements 100 to 240 V AC, 50/60Hz  
Operating temperature 0 to +35°C (32 to 95°F)  
Storage temperature -10 to +40°C (14 to 104°F)  
Operating humidity 35 to 85% (no condensation)  
Storage humidity 0 to 90%  
Dimensions (w/h/d) Approx. 450 × 458 × 503 mm  
(17<sup>3</sup>/<sub>4</sub> × 18<sup>1</sup>/<sub>8</sub> × 19<sup>7</sup>/<sub>8</sub> inches)  
not incl. projecting parts and controls  
Mass Approx. 30.0 kg (66 lb 2 oz)  
Accessory supplied AC power cord (1)  
AC plug holder (1)  
Tally label (1)  
Cable with a 20-pin connector (1)

**For PVM-20M2U:**

CRT P-22 phosphor  
Power consumption 115 Wh (with SDI: 125 Wh)  
Power requirements 120 V AC, 50/60Hz  
Operating temperature 0 to +35°C (32 to 95°F)  
Storage temperature -10 to +40°C (14 to 104°F)  
Operating humidity 35 to 85% (no condensation)  
Storage humidity 0 to 90%  
Dimensions (w/h/d) Approx. 450 × 458 × 503 mm  
(17<sup>3</sup>/<sub>4</sub> × 18<sup>1</sup>/<sub>8</sub> × 19<sup>7</sup>/<sub>8</sub> inches)  
not incl. projecting parts and controls  
Mass Approx. 30.0 kg (66 lb 2 oz)  
Accessory supplied AC power cord (1)  
AC plug holder (1)  
Tally label (1)  
Cable with a 20-pin connector (1)

**For PVM-20M2E:**

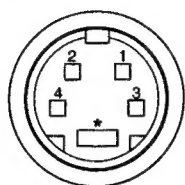
CRT P-22 phosphor  
Power consumption 120 Wh (with SDI: 130 Wh)  
Power requirements 100 to 240 V AC, 50/60Hz  
Operating temperature 0 to +35°C (32 to 95°F)  
Storage temperature -10 to +40°C (14 to 104°F)  
Operating humidity 35 to 85% (no condensation)  
Storage humidity 0 to 90%  
Dimensions (w/h/d) Approx. 450 × 458 × 503 mm  
(17<sup>3</sup>/<sub>4</sub> × 18<sup>1</sup>/<sub>8</sub> × 19<sup>7</sup>/<sub>8</sub> inches)  
not incl. projecting parts and controls  
Mass Approx. 30.0 kg (66 lb 2 oz)  
Accessory supplied AC power cord (1)  
AC plug holder (1)  
Tally label (1)  
Cable with a 20-pin connector (1)

Design and specifications are subject to change  
without notice.



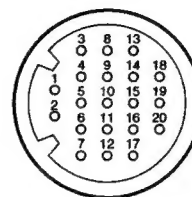
## Pin assignment

Y/C IN connector (4-pin mini-DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA subcarrier-input	300m Vp-p, burst Delay time between Y and C: within $0 \pm 100$ nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

## REMOTE connector (20-pin)



Pin No.	Signal	Wire color
1	Blue only	Brown
2	H/V DELAY	Red
3	MAIN/SUB*	Orange
4	EXT SYNC	Yellow
5	DEGAUSS	Green
6	R ch ON/OFF*	Blue
7	TALLY	Purple
8	LINE B	Grey
9	GND	White
10	GND	Black
11	GND	Pink
12	GND	Light Blue
13	LINE A	Spiral Orange
14	LINE/RGB	Spiral Yellow
15	GND	Spiral Green
16	L ch ON/OFF*	Spiral Blue
17	REMOTE	Spiral Purple
18	LINE C	Spiral Grey
19	UNDER SCAN	Spiral Pink
20	16:9	Spiral Light Blue

(\* For digital audio control)

### How to connect a remote control unit

Connect No.17 pin to one of the GND pins (No.9 – 12, and 15), then connect pins for the functions you want to use to other GND pins (No.9 – 12, and 15).

### How to light the tally lamp

Connect No.7 pin to one of the GND pins (No.9 – 12, and 15).



## SAFETY CHECK-OUT (US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the metal trim, metallized knobs, screws, and all other exposed metal parts for AC leakage.  
Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufactures' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

### HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

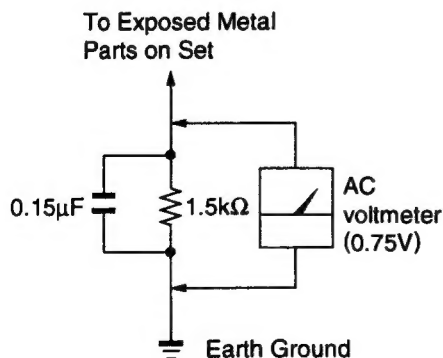


Fig. A. Using an AC voltmeter to check AC leakage.

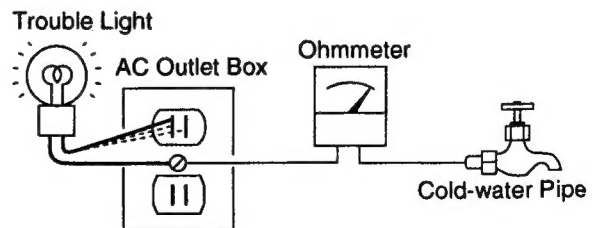


Fig. B. Checking for earth ground.



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## (CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

## WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

**SAFETY-RELATED COMPONENT WARNING!!**  
COMPONENTS IDENTIFIED BY SHADING AND MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

## (ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

## ATTENTION!!

AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

## ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  $\Delta$  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDiqué DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.



# SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

## Features

### Picture

**HR (High Resolution) Trinitron™ picture tube for PVM-14M4U/14M4E/20M4U/20M4E**  
HR Trinitron tube provides a high resolution picture. Horizontal resolution is more than 800 TV lines at the center of the picture.

**Trinitron™ picture tube for PVM-14M2U/14M2E/20M2U/20M2E**  
Trinitron tube provides a high resolution picture. Horizontal resolution is more than 600 TV lines at the center of the picture.

#### Comb filter

When NTSC video signals are received, a comb filter activates to make more accurate Y/C separation. This contributes to less of a decrease in resolution, cross color and cross luminance phenomena.

#### Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

#### Four color system available

The monitor can display NTSC, PAL, SECAM and NTSC-M signals. The appropriate color system is selected automatically.

#### Blue only mode

In the blue only mode, an apparent monochrome display is obtained with all three cathodes driven with a blue signal. This facilitates color saturation and phase adjustments and observation of VCR noise.

### Input

**Analog RGB/component input connectors**  
Analog RGB or component (Y, R-Y and B-Y) signals from video equipment can be input through these connectors.

#### Y/C input connectors

The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, ensuring video quality.

#### External sync input

When the EXT SYNC selector is in the on position, the monitor can be operated on the sync signal supplied from an external sync generator.

#### Automatic termination

(connector with  mark only)

The input connector is terminated at 75 ohms inside when no cable is connected to the loop-through output connector. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

### Functions

#### Underscan mode

The signal normally scanned outside of the screen can be monitored in the underscan mode.

#### Edge

When the monitor is in the underscan mode, the dark RGB scanning lines may appear on the top edge of the screen. These are caused by an internal test signal, rather than the input signal.

#### Horizontal/vertical delay mode

The horizontal and vertical sync signals can be checked simultaneously in the H/V delay mode.

#### Auto/manual degaussing

Degaussing of the screen can be performed automatically when the power is turned on, or manually by pressing the DEGAUSS button.

#### On-screen menus

You can set color temperature, CHROMA SET UP, and other settings by using the on-screen menus.

### Five menu languages

You can select the menu language from among five languages on the menu.

### EIA standard 19-inch rack mounting

By using an MB-502B mounting bracket (for a 14-inch monitor, not supplied) or SLR-103A slide rail (for a 20-inch monitor, not supplied), the monitor can be mounted in an EIA standard 19-inch rack.

For details on mounting, refer to the instruction manuals supplied with the mounting bracket kit or slide rail kit.

### SDI (Serial Digital Interface) Kit

By using the following optional SDI Kits, the monitor can display SMPTE 259M 4:2:2 serial digital signal from a digital VCR. (ex. Sony 4:2:2 VCR)

- BKM-101C: Component SDI Kit (for video)
- BKM-102: Component SDI Kit (for audio)

#### Note

When the serial number of the BKM-101C you want to connect is less than 2,010,000, an optional connecting harness (part no. 1-900-230-35) will be required.

### Serial Remote Interface Kit

By using the optional BKM-103 Serial Remote Interface Kit, the monitor can be controlled from personal computers via the RS-422A serial interface.

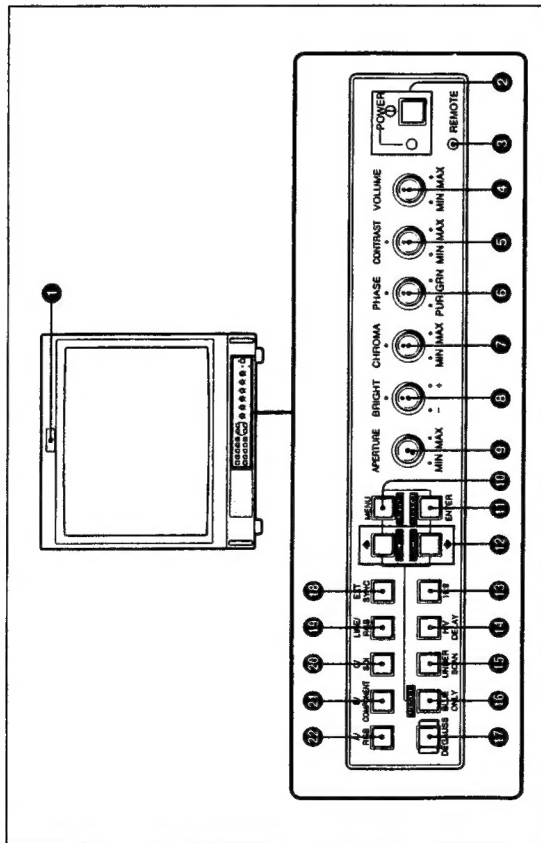
1) "Trinitron" is a registered trademark of Sony Corporation.

2) The NTSC-M system refers to an NTSC color system in which the subcarrier frequency is modified to 4.43MHz. When an NTSC (recoded video) program is played back with a Trinitron (PAL/SECAM/NTSC-M) VTR, the NTSC-M signal is output.



## Location and Function of Parts and Controls

### Front



**1 Tally lamp**  
Lights up when the video camera connected to this monitor is selected, indicating that the picture is being recorded.  
For details on how to light the tally lamp, see page 19.

**2 POWER switch and indicator**  
Depress to turn on the monitor. The indicator will light green.

**3 REMOTE indicator**  
Lights up when you select ON on the USER PRESET menu (see page 13), or when you connect a supplied cable to the REMOTE connector. The controls on the front panel do not work when this indicator lights up.  
For details on how to connect the cable, see page 19.

**4 VOLUME control**  
Turn this control clockwise or counterclockwise to obtain the desired volume.

**5 CONTRAST control**  
Turn this control clockwise to make the contrast higher or counterclockwise to make it lower.

**6 PHASE control**  
This control is effective only for the NTSC and NTSC-M color systems. Turn it clockwise to make the skin tones greenish or counterclockwise to make them purplish.

**7 CHROMA control**  
Turn this control clockwise to increase the color intensity or counterclockwise to decrease it.

**8 BRIGHT (brightness) control**  
Turn this control clockwise to increase the brightness or counterclockwise to decrease it.

**9 APERTURE control**  
Turn this control clockwise to increase sharpness or counterclockwise to decrease sharpness.

### TUNE

The PHASE (6), CHROMA (7) and APERTURE (9) controls have no effect on the pictures of RGB signals.

**10 MENU (EXIT) button**  
Press this button to display the main menu.  
When a menu is on the display, you can return to the previous menu by pressing this button.

**11 ENTER (SELECT) button**  
Press the button to confirm a selected item on the menu.

**12 ↑ (+) / ↓ (-) buttons**  
Press the buttons to move the cursor (▶) or adjust selected item on the menu.

**13 16:9 selector**  
Press this selector (light on) to monitor the signals of 16:9 picture.

**14 H/V DELAY selector**  
Press this selector (light on) to observe the horizontal and vertical sync signals at the same time.  
The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

**15 UNDER SCAN selector**  
Press this selector (light on) for underscanning.  
The display size is reduced by approximately 5% so that four corners of the raster are visible.

**16 BLUE ONLY selector**  
**RESET button**  
• As the BLUE ONLY selector, press this selector (light on) to eliminate the red and green signals. Only blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" adjustments and observation of VCR noise.  
("Phase" adjustment is effective only for the NTSC signals.)  
• As the RESET button, you can reset the menu settings by pressing this button when a menu is on the display.

**17 DEGAUSS button**  
Press this button momentarily. The screen will be demagnetized. Wait for 10 minutes or more before using this button again.



**18 EXT SYNC (external sync) selector**  
• Set this selector to the off position (light off) to operate the monitor on the sync signal from the displayed video signal.  
• Set this selector to the on position (light on) to operate the monitor on an external sync signal through the EXT SYNC connector.

**19 LINE/RGB input selector**  
Press this selector to select the input to be monitored.  
• Set this selector to the off position (light off) to monitor the signal through the LINE A, LINE B or LINE C connectors.  
• Set this selector to the on position (light on) to monitor the signal through the RGB/COMPONENT connectors.

**20 C/SDI selector**  
• When the LINE/RGB input selector is set to the LINE position (light off), press this selector (light on) to monitor the signal through the LINE C connectors.  
• When the LINE/RGB input selector is set to the RGB position (light on), press this selector (light on) to monitor the SDI signal (optional kits are required).

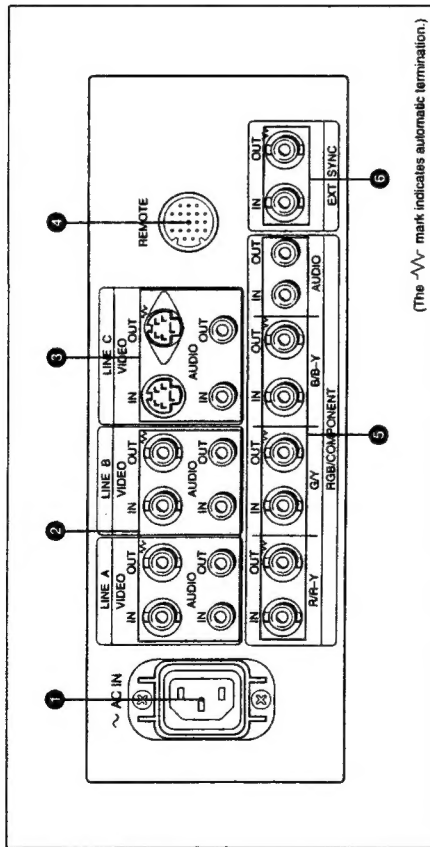
**21 B/COMPONENT selector**  
• When the LINE/RGB input selector is set to the LINE position (light off), press this selector (light on) to monitor the signal through the LINE B connectors.  
• When the LINE/RGB input selector is set to the RGB position (light on), press this selector (light on) to monitor the component signal through the RGB/COMPONENT connectors.

**22 A/RGB selector**  
• When the LINE/RGB input selector is set to the LINE position (light off), press this selector (light on) to monitor the signal through the LINE A connectors.  
• When the LINE/RGB input selector is set to the RGB position (light on), press this selector (light on) to monitor the RGB signal through the RGB/COMPONENT connectors.



## Location and Function of Parts and Controls

### Rear Panel



#### 1 AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

#### 2 LINE A, LINE B connectors

Two groups (A and B) of line input connectors for the composite video and audio signals and their loop-through output connectors.

To monitor the input signal through these connectors, set the LINE/RGB selector to the LINE position (light off) and press the A/RGB or B/COMPONENT selector (light on).

#### VIDEO IN (BNC)

Connect to the video output of video equipment, such as a VCR or a color video camera. For a loop-through connection, connect to the video output of another monitor.

#### VIDEO OUT (BNC)

Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

When the cable is connected to this connector, the 75-ohm termination of the input is automatically released, and the signal input to the VIDEO IN connector is output from this connector.

#### AUDIO IN (phono jack)

Connect to the audio output of a VCR or to a microphone via a suitable microphone amplifier. For a loop-through connection, connect to the audio output of another monitor.

#### AUDIO OUT (phono jack)

Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

#### 3 LINE C connectors

Y/C IN (4-pin mini-DIN) Connect to the separate output of a video camera, VCR or other video equipment. For a loop-through connection, connect to the Y/C separate output of a VCR or another monitor.

#### Y/C OUT (4-pin mini-DIN)

Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

When the cable is connected to this connector, the 75-ohm termination of the input is automatically released, and the signal input to the Y/C IN connector is output from this connector.

#### AUDIO IN (phono jack)

Connect to the audio output of a VCR or a microphone (via a suitable microphone amplifier).

#### AUDIO OUT (phono jack)

Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

#### 4 REMOTE connector (20-pin)

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can also be used for connecting a remote control unit.

For details on the pin assignment of this connector, see page 19.

#### 5 RGB/COMPONENT connectors

RGB signal or component signal input connectors and their loop-through output connectors.

To monitor the input signal through these connectors, set the LINE/RGB selector to the RGB position (light on), and press the A/RGB or B/COMPONENT selector (light on).

#### R/R-Y IN, G/Y IN, B/B-Y IN (BNC)

When the EXT SYNC selector is set to the off position (light off), the monitor operates on the sync signal from the G/Y channel.

#### To monitor the RGB signal

Connect to the analog RGB signal outputs of a video camera, etc.

#### To monitor the component signal

Connect to the R-Y/Y-B-Y component signal outputs of a Sony Betacam video camera, etc.

#### R/R-Y OUT, G/Y OUT, B/B-Y OUT (BNC)

Loop-through outputs of the R/R-Y IN, G/Y IN, B/B-Y IN connectors.

When the cables are connected to these connectors, the 75-ohm termination of the inputs is automatically released, and the signal inputs to the R/R-Y IN, G/Y IN, B/B-Y IN connectors are output from these connectors.

#### To output the RGB signal

Connect to the analog RGB signal inputs of a video printer or another monitor.

#### To output the component signal

Connect to the R-Y/Y-B-Y component signal inputs of a Betacam video recorder, etc.

#### AUDIO IN (phono jack)

Connect to the audio output of video equipment when the analog RGB or component signal is input.

#### AUDIO OUT (phono jack)

Loop-through outputs of the AUDIO IN connector.

6 EXT SYNC (external sync) connectors Press the EXT SYNC selector (light on) to use the sync signal through this connector.

#### IN (BNC)

When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector.

#### OUT (BNC)

Loop-through output of the IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

When the cable is connected to this connector, the 75-ohm termination of the input is automatically released, and the signal input to the IN connector is output from this connector.

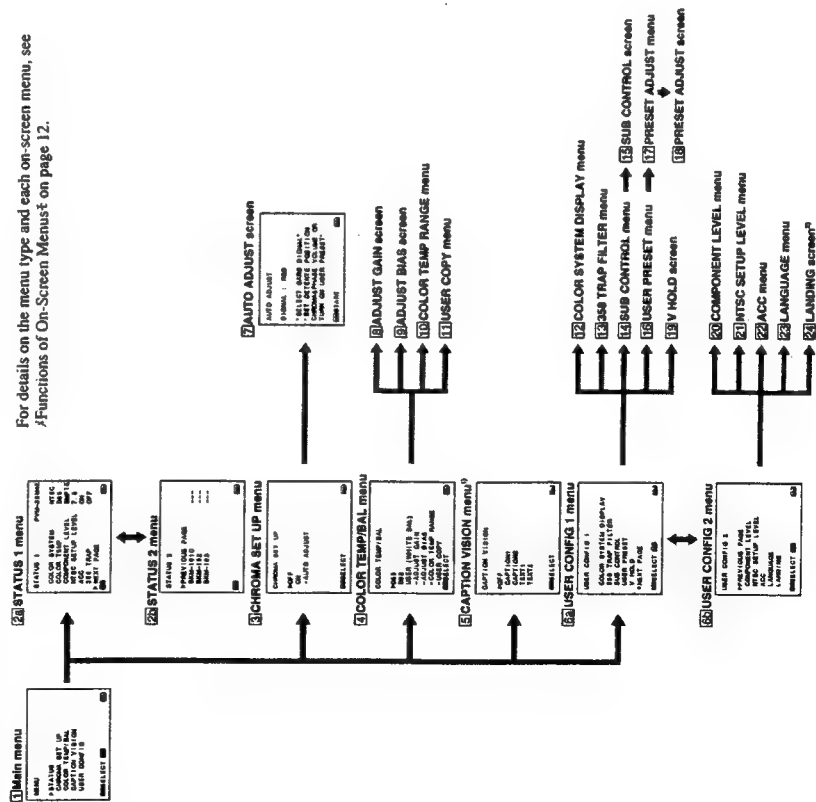


## Using On-Screen Menus

You can make various settings and adjustments of the monitor using the on-screen menus.

### On-Screen Menu Configuration

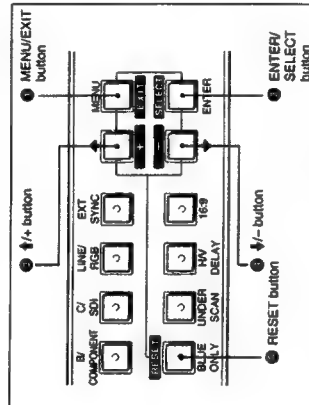
#### On-screen menu tree-chart



### Operation through On-Screen Menus

#### Menu operation buttons

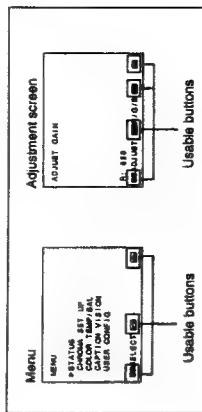
There are five menu operation buttons on the front panel of the monitor.



The following table shows how these five buttons function when using the menus.

Button	To select menu item	To adjust the item selected
1 MENU/EXIT	return to the previous menu	
2 ENTER/SELECT	decide a selected item	
3 Left Arrow	move the cursor (left) upwards	increase selected value
4 Right Arrow	move the cursor (right) downwards	decrease selected value
5 Combination Arrow	reset current settings to the factory setting	

The buttons that can be used on the menus and adjustment screens are displayed at the bottom of the screen. You can perform menu operation using the displayed buttons.



Display of the usable menu operation buttons

#### Operating procedures

To display the menu, follow this procedure.

- 1 Press the MENU/EXIT (1) button.  
MENU (1 : main menu) appears.
- 2 Move the cursor (left) to the desired setting menu by pressing the left or right arrow button.
- 3 Press the ENTER/SELECT (2) button.  
The setting menu selected in step 2 appears.
- 4 Move the cursor (left) to the desired item by pressing the left or right arrow button.
- 5 Press the ENTER/SELECT (2) button.  
The adjustment screen or setting menu selected in step 4 appears.

For detailed information of menus, see /Functions of On-Screen Menust on page 12.

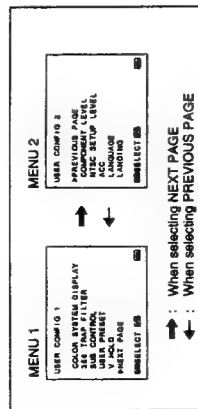
- 1) 5 CAPTION VISION menu is provided with PVM-14M4U/14M2U/20M4U/20M2U only.
- 2) 24 LANDING screen is provided with PVM-20M4U/20M4E only.



## Using On-Screen Menus

To display the next (or previous) page of the menus

Select NEXT PAGE on the menu to display the next page and PREVIOUS PAGE on the menu to display the previous page.



How to display the next or the previous page

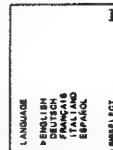
To close the menu (to return to the regular screen)

Each time you press the MENU/EXIT (M) button, the on-screen menu returns to the one previously displayed. Press the MENU/EXIT (M) button repeatedly until the regular screen appears.

For PVM-14M4E/14M2E/20M4E/20M2E:

For the first time when the monitor is turned on, the LANGUAGE menu (23) will appear on the screen.

So, select the language you want to use.



1 Move the cursor (P) to the desired language by pressing the P/- or P/+ (P) button.

2 Press the MENU/EXIT (M) button.

### Note

Unless you press the MENU/EXIT (M) button in the procedure above, the LANGUAGE menu will always appear whenever you turn on the monitor.

## Functions of On-Screen Menus

There are four types of on-screen menus.

- Main menu**  
You can enter another menu such as status menu or setting menu.
- Status menu**  
You can confirm the current settings.
- Setting menu**  
You can select an item or enter an adjustment screen on this menu by using the P/+, P/- and ENTER/SELECT buttons.
- Adjustment screen**  
You can make adjustments on this screen. The adjustments you made remain unchanged until next change even if you turn off the power.

(I) indicates the factory setting.)

**1 Main menu**  
Select another menu and press ENTER/SELECT to go to the menu.

**2 STATUS 1 menu**  
Shows the current settings.

**23 STATUS 2 menu**  
Shows what optional kit is installed in the monitor.

**3 CHROMA SET UP menu**  
Select ON on this menu to activate "chroma" and "phase" (NTSC signal only) adjustments done on the AUTO ADJUST screen (17).

**4 COLOR TEMP/BAL menu**  
Select the color temperature from among D65, D93 and USER. USER is set to D65 as the factory setting. You can adjust or change the color temperature in USER mode (a measuring instrument is required).

**5 CAPTION VISION menu**  
This menu is provided only for PVM-14M4U/14M2U/20M4U/20M2U.

The monitor can display the signal with Caption Vision. To display it, select the caption type in this menu.

**6 USER CONFIG 1 menu**

Select an item to adjust on the menus and screens (12) through (19). To go to the USER CONFIG 2 menu, select NEXT PAGE.

**62 USER CONFIG 2 menu**  
Select an item to adjust on the menus and screens (20) through (24). To go to the USER CONFIG 1 menu, select PREVIOUS PAGE.

**7 AUTO ADJUST screen**  
Select the color bar signal (full, SMPTE, EIA) and press ENTER/SELECT to start automatic "chroma" and "phase" (NTSC signal only) adjustments. To activate these adjustments, select ON on the CHROMA SET UP menu (3).

**8 ADJUST GAIN screen**  
Adjust GAIN in USER mode.

**9 ADJUST BIAS screen**  
Adjust BIAS in USER mode.

**10 COLOR TEMP RANGE menu**  
Select the color temperature range in USER mode.  
[3000K-10000K]

**11 USER COPY menu**  
Store the factory setting of D65 or D93 as the value for USER mode.

**12 COLOR SYSTEM DISPLAY menu**  
Select the color system type. When AUTO is selected, the color system type being used appears on the screen each time you change the signal input.  
[AUTO]

**13 358 TRAP FILTER menu**  
Color spill or color noise may be eliminated if you select ON (NTSC signal only).  
Normally select OFF.  
[OFF]

**14 SUB CONTROL menu**  
Select an item (CONTRAST, BRIGHT, CHROMA and PHASE controls on the front panel) to finely adjust on the SUB CONTROL screen (15).

**15 SUB CONTROL screen**

Finely adjust the selected item on the SUB CONTROL menu (14). Each control (CONTRAST, BRIGHT, CHROMA and PHASE control) has a click position at the center of its adjustment range. You can adjust the setting of the click position with this feature.

**16 USER PRESET menu**  
If you select ON on this menu, the REMOTE indicator lights up and the controls on the front panel do not work. The monitor operates with the user preset settings. To adjust the user preset settings, select the PRESET ADJUST menu (17).  
[OFF]

**17 PRESET ADJUST menu**  
You can preset the BRIGHT, CHROMA, PHASE, CONTRAST, VOLUME, and APERTURE controls to a desired level and can use these settings by selecting ON on the USER PRESET menu (16).

**18 PRESET ADJUST screen**  
Adjust the selected item (BRIGHT, CHROMA, PHASE, CONTRAST, VOLUME, and APERTURE control) on the PRESET ADJUST menu (17).

**19 V HOLD screen**  
Adjust the vertical hold if the picture rolls vertically. When you cannot read the display, select the input that is not connected.

**20 COMPONENT LEVEL menu**  
Select the component level from among three modes.  
NTSC SMPTE for 100/0/100/0 signal  
BETA 7.5 for 100/7.5/75/7.5 signal  
BETA 0 for 100/0/75/0 signal  
For PVM-14M4U/14M2U/20M4U/20M2U  
[BETA 7.5]

For PVM-14M4E/14M2E/20M4E/20M2E  
[NTSC SMPTE]



## Using On-Screen Menus

### 21 NTSC SETUP LEVEL menu

Select the NTSC setup level from two modes.

The 7.5 setup level is mainly used in north America.

The 0 setup level is mainly used in Europe.

For PVM-14M4U/14M2U/20M4U/20M2U [7.5]

For PVM-14M4E/14M2E/20M4E/20M2E [0]

### 22 ACC menu

Set ACC (Auto Color Control) circuit on or off. When the fine adjustment is necessary, select OFF on the ACC menu.

Normally select ON.

[ON]

### 23 LANGUAGE menu

You can select the menu language from among five languages (English, German, French, Italian, Spanish).

[ENGLISH]

### 24 LANDING screen

This menu is provided only for PVM-20M4U/20M4E.

If the color is not uniform even after you press the

DEGAUSS button, you can adjust the landing so as to

obtain color uniformity on this screen.

The following two methods are available to adjust the landing.

When the signals of the horizontal lines are input and displayed:

Press the  $\blacktriangle/\text{--}$  or  $\blacktriangle/\text{+}$  button until the lines are displayed on the screen as horizontally as possible.

When the signals of the white color are input and displayed:

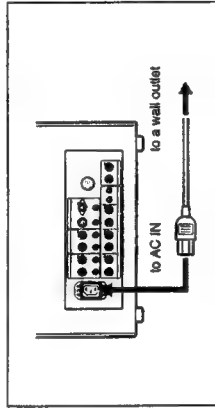
Press the  $\blacktriangle/\text{--}$  or  $\blacktriangle/\text{+}$  button until the white color on the screen become uniform as possible.

To reset the setting to standard (00), press the RESET button.

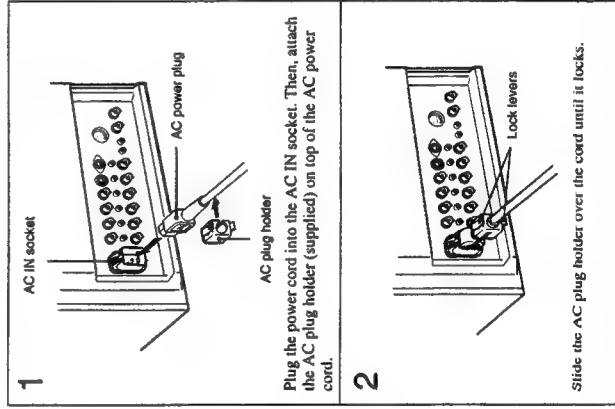
## Connections

### How to Connect the AC Power Cord

Connect the AC power cord (supplied) to the AC IN socket and to a wall outlet.



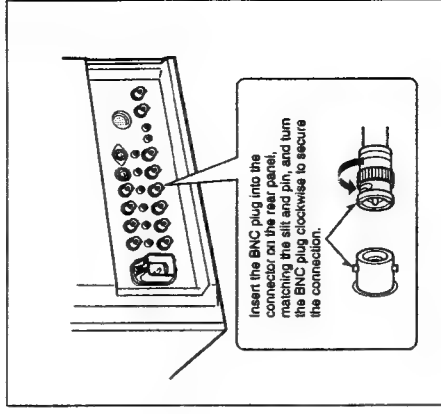
To connect an AC power cord securely with an AC plug holder



To remove the AC power cord  
Pull out the AC plug holder while pressing the lock levers.

### How to Connect a Cable to a BNC Connector

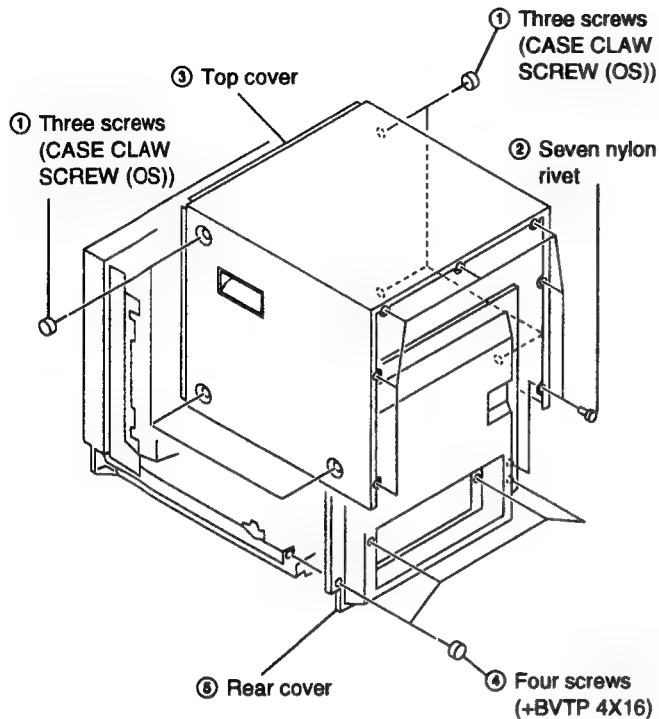
Connect a coaxial cable with the BNC plugs to the BNC connectors on the rear panel as illustrated below.



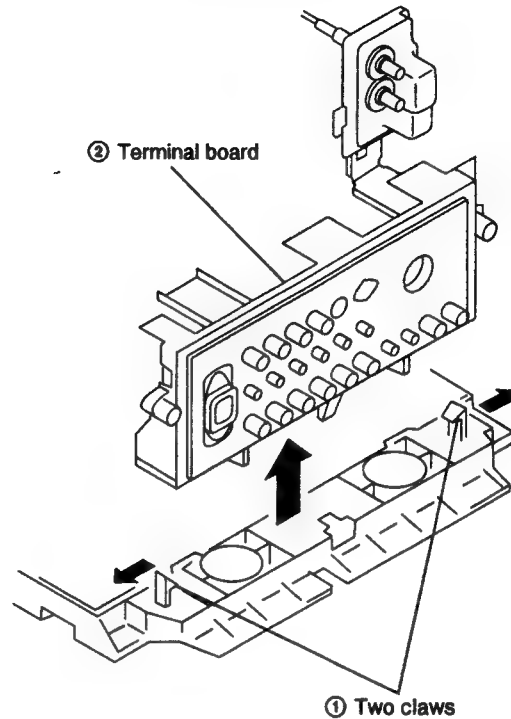


## SECTION 2 DISASSEMBLY

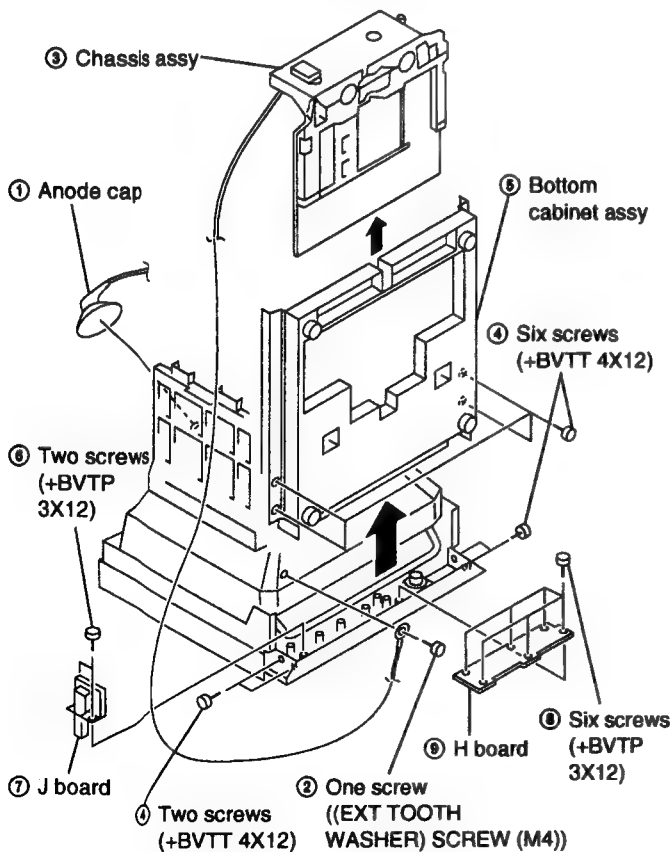
### 2-1. TOP COVER AND REAR COVER REMOVAL



### 2-2. TERMINAL BOARD REMOVAL

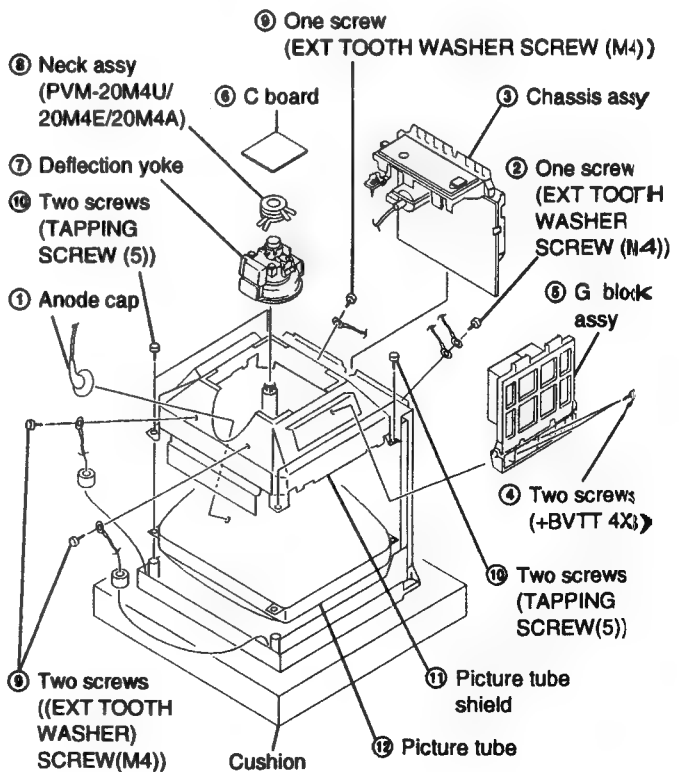


### 2-3. J AND H BOARDS REMOVAL



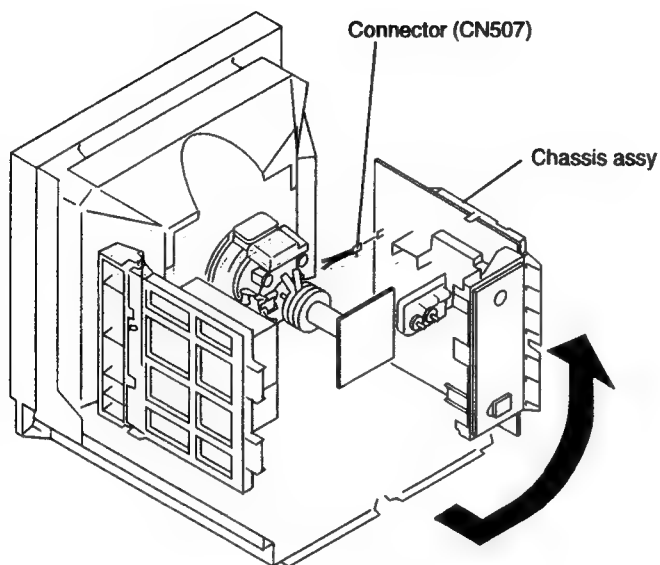
### 2-4. PICTURE TUBE REMOVAL

When exchange the Picture tube of PVM-20M4 series and if the magnet had stuck on the neck of the Picture tube, peel it.



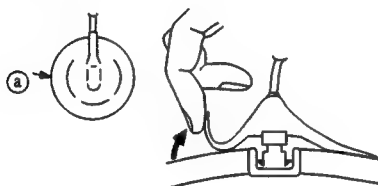


## 2-5. SERVICE POSITION

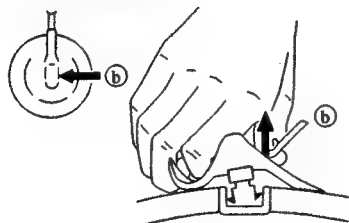


### • REMOVAL OF ANODE-CAP

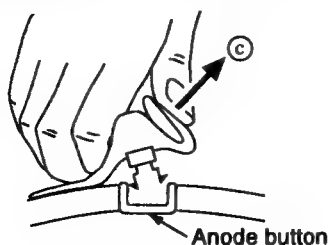
**NOTE :** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.



### • REMOVING PROCEDURES



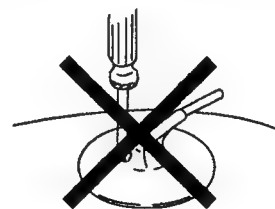
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).



- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow (c).

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material
- ② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





## SECTION 3 SET-UP ADJUSTMENTS

### 3-1. PREPARATIONS (1)

#### **Service Mode**

This set is provided with a switch for service on the front panel that can be used to make various adjustments. The operation method of this switch is explained in detail below.

#### 1. Entering the service mode

Simultaneously press the [ENTER] key and the [DEGAUSS] key shown on the display of the menu.

#### 2. Service mode display

(1)	(5)	(4)	(3)	(6)
(2)				

Range of Service Mode Display

- (1) The service items are largely classified into 16 types displayed by titles.
- (2) The names of the service items or READ/WRITE guidance, etc., are displayed. The names are displayed to the left and the guidance to the right.
- (3) This is the serial number for each of the service items. 1-120.
- (4) This is the adjustment data for the service items that are now stored in the RAM. Adjustments can be made by changing these values, but as long as nothing is written to the ROM the adjustment values will be erased by turning off the power or by reading, so please be careful.
- (5) When the adjustment data that is now displayed is identical with the data in the ROM, the cursor (►) is displayed.
- (6) The present status is displayed.  
 [\*]: Writing to the ROM. Make sure not to turn off the power while this display is on.  
 [?]: ROM reading error. In this case, an image is output with the standard adjustment data that the microcomputer itself possesses.  
 [⌂]: Problem in the I2C bus.

#### 3. Finishing the service mode

Simultaneously press the [ENTER] key and the [DEGAUSS] key shown on the display of the menu.

#### 4. Easy ON/OFF of the service mode

If once entering the service mode after having turned on the power, easy ON/OFF is possible by once more pressing the A, B or C switch on the front panel (the LED lights) as long as the power is not turned off or as long as the service mode is not finished.

#### 5. Change of position of the service mode display

If the switch is continuously pressed when turning on in the above easy mode, the display position moves in the V direction. This method is used when the display is outside of the effective screen area.

#### 6. Change of service items

The items are returned with the [MENU] key and forwarded with the [ENTER] key. When a key is continuously pressed, the operation will be repeated.

#### 7. Change of service data

The service data is made larger with the [↑] key and smaller with the [↓] key. When continuously pressing the keys, the operation will be repeated.

#### 8. Reading of service data

When reading data from the ROM to the RAM, press the [B / O] key once and check that the READ display is shown in the guidance, and then press the [B/O] key once again. The adjustment data that is written will return to its previous state, so please be careful.

#### 9. Writing of service data

When writing data from the RAM to the ROM, press the [DEGAUSS] key once and check that the WRITE display shown in the guidance, and then press the [DEGAUSS] key once again. Not only the displayed data will be written, but all data, so please be careful.

#### 10. Carrying out FACTORY RESETTING

In case the adjustment data has been destroyed for some reason, and you keep pressing the [B/O] key at the beginning of the above reading, the READ guidance will change to FACTORY RESET guidance in approximately 3 seconds so that the factory resetting can be carried out. By once again pressing the [B/O] key after this, resetting will be carried out ([\*] will be displayed as status) and factory resetting will be executed. However, in case the data available at the time of shipment from the factory has been destroyed, or if the ROM has been replaced, etc., or if factory setting mentioned later on has been carried out, factory resetting is executed.

#### 11. Carrying out FACTORY SETTING

Make sure to make possible the above factory resetting by making a copy of the adjustment data when replacing the ROM. If you keep pressing the [DEGAUSS] key at the beginning of the above writing, the WRITE guidance will change into FACTORY RESET guidance after approximately 3 seconds. By once again pressing the [DEGAUSS] key after this, setting will be carried out ([\*] will be displayed as status) and the data will be copied. By carrying out this operation, the selection items of the menu and the adjustment values will be reset to the standard conditions, so please be careful. If this operation is carried out once, it cannot be carried out again, but the FACTORY SET FLAG (No. 120) in the service mode can be set to 1.



# SERVICE MAP

Table 3-1 Table map (1)

\* Signify (The setting is vary with the destination.)  
Refer to the "Table 3-1 Table map (2)."

No.	SERVICE ITEM		MAX	STD	No.	SERVICE ITEM		MAX	STD
1	NOR 50 DEF	H FREQUENCY	255	85	61	C/T1 D??	BIAS <RED>	1023	376
2		VIDEO PHASE	255	139	62		BIAS <GREEN>	1023	512
3		V SIZE	255	139	63		BIAS <BLUE>	1023	396
4	NOR 60 DEF	H FREQUENCY	255	96	64		GAIN <RED>	1023	660
5		VIDEO PHASE	255	115	65		GAIN <GREEN>	1023	620
6		V SIZE	255	137	66		GAIN <BLUE>	1023	602
7	NOR DEF	V CENTER	255	103	67		B/O <RED>	255	115
8		H SIZE	255	108	68		B/O <GREEN>	255	115
9		PIN PHASE	255	128	69	C/T2 D??	3200K SW	1	0
10		PIN AMP	255	128	70		BIAS <RED>	1023	256
11		LOWER PIN AMP	255	128	71		BIAS <GREEN>	1023	512
12		UPPER PIN AMP	255	128	72		BIAS <BLUE>	1023	512
13		SEXY	255	128	73		GAIN <RED>	1023	602
14		V LINEARITY	255	120	74		GAIN <GREEN>	1023	700
15		V BOW	63	32	75		GAIN <BLUE>	1023	672
16		LOWER BOW	63	32	76		B/O <RED>	255	95
17		V ANGLE	63	32	77		B/O <GREEN>	255	108
18	U/S DEF	V SIZE <50>	255	100	78	W/B	SUB CON <4 :3,NORMAL>	255	178
19		V SIZE <60>	255	100	79		SUB CON <4 :3,H/V DELAY>	255	97
20		H SIZE	255	118	80		SUB CON <16 :9,NORMAL>	255	150
21		PIN PHASE	255	128	81		SUB CON <16 :9,H/V DELAY>	255	78
22		PIN AMP	255	100	82		SUB BRIGHT	255	69
23	16 : 9 NOR DEF	V SIZE <50>	255	72	83		USER B/O <RED>	255	115
24		V SIZE <60>	255	60	84		USER B/O <GREEN>	255	115
25		PIN PHASE	255	135	85	OTHER	LANDING	255	64
26		PIN AMP	255	90	86		V HOLD	255	128
27	16 : 9 U/S DEF	V SIZE <50>	255	61	87		H BLANKING	255	73
28		V SIZE <60>	255	39	88		V BLANKING <50>	255	82
29		PIN PHASE	255	135	89		16 : 9 BLANKING START <50>	255	32
30		PIN AMP	255	65	90		16 : 9 BLANKING END <50>	255	176
31	COMPONENT	SUB PHASE	255	130	91		V BLANKING <60>	255	161
32		SUB CHROMA <NORMAL>	255	182	92		16 : 9 BLANKING START <50>	255	42
33		SUB CHROMA <SMPTE>	255	170	93		16 : 9 BLANKING END <50>	255	226
34		R-Y LEVEL	255	163	94		H DELAY	255	142
35	NTSC	BU RST GAT E PULSE WID TH	255	52	95		V DELAY	255	104
36		CRYSTAL	255	59	96		HP POSITION	255	145
37		PHASE <NORMAL>	255	80	97		HP WIDTH <NORMAL>	255	148
38		PHASE <ACC OFF>	255	96	98		HP WIDTH <H/V DELAY>	255	62
39		B-Y PHASE	255	162	99	SYSTEM	SDI AUDIO	7	5
40		CHROMA <NORMAL>	255	98	100		358 TRAP FILTER	1	0
41		CHROMA <ACC OFF>	255	27	101		ACC	1	0
42		R-Y LEVEL	255	98	102		CAPTION VISION	7	0
43	NTSC 443	CRYSTAL	255	82	103		COMPONENT LEVEL	3	*
44		PHASE <NORMAL>	255	62	104		NTSC SETUP LEVEL	1	*
45		PHASE <ACC OFF>	255	64	105		CHROMA SET UP	1	0
46		B-Y PHASE	255	181	106		COLOR SYSTEM DISPLAY	3	0
47		CHROMA <NORMAL>	255	104	107		COLOR TEMPERATURE	3	0
48		CHROMA <ACC OFF>	255	36	108		USER PRESET	1	0
49		R-Y LEVEL	255	100	109		LANGUAGE	7	0
50	PAL	PHASE <NORMAL>	255	110	110		RGB SYNC	1	0
51		PHASE <ACC OFF>	255	105	111		OPTION BOARD	7	0
52		B-Y PHASE	255	122	112		AGING MODE	1	0
53		CHROMA <NORMAL>	255	109	113		PAL-M	1	0
54		CHROMA <ACC OFF>	255	41	114		MODEL	31	*
55		R-Y LEVEL	255	121	115		COLOR TEMP DISP 1	127	*
56	SECAM	CHROMA	255	93	116		COLOR TEMP DISP 2	127	*
57		R-Y LEVEL	255	181	117		REMOTE ADDRESS	63	0
58		COLOR BALANCE <R-Y>	255	118	118		RESERVED 1	1	0
59		COLOR BALANCE <B-Y>	225	135	119		RESERVED 2	2	0
60	C/T1 D??	3200K SW	1	0	120		FACTORY SET FLAG	1	0



**Table 3-1 Table map (2)**

Model Name	Component level	NTSC Set-up level	Model	Color temp disp 1	Color temp disp 2
PVM-20M4U	1	1	0	65	93
PVM-20M2U	1	1	1	65	93
PVM-20M4J	2	0	2	93	65
PVM-20M4E	2	0	3	65	93
PVM-20M2E	2	0	4	65	93
PVM-14M4U	1	1	5	65	93
PVM-14M2U	1	1	6	65	93
PVM-14M4J	2	0	7	93	65
PVM-14M1J	2	0	8	93	65
PVM-14M4E	2	0	9	65	93
PVM-14M2E	2	0	10	65	93
PVM-20M4A	2	0	11	65	93
PVM-14M4A	2	0	12	65	93
PVM-14M2A	2	0	13	65	93
PVM-14M4B	1	1	14	65	93
BVM-14M4DJ	2	0	15	93	65
BVM-14M4DE	2	0	16	65	93
PVM-20M4T	2	0	17	93	65
PVM-14M4T	1	0	18	93	65



### 3-2. Preparation (2). Initialization

- \* Supply composite video or component signals as shown in Table 3-2.

Table 3-2

Signal		Details of signal	Standard level P-W
Composite video	358NT 443NT }	100% white	0.714V
		75% white	0.536V
	PALM PAL SECAM }	100% white	0.7V
		75% white	0.525V
Component	BETA0	100% white Y	0.7V
		75% white Y	0.525V
		75%color B-Y, R-Y  (P-P for this item only)	0.7V
	SMPTE	100% white Y	0.7V
		75% white Y	0.525V
		75%color B-Y, R-Y  (P-P for this item only)	0.525V
Voice/sound		-5dBs	0.436Vrms

\* Refer to Table 3-3 for groups of models.

Table 3-3

Group of models	Models		
1	PVM-14M4U PVM-14M4A	PVM-14M4J	PVM-14M4E
2	PVM-14M2U	PVM-14M2E	PVM-14M2A
3	PVM-14M1J		
4	PVM-20M4U PVM-20M4A	PVM-20M4J	PVM-20M4E
5	PVM-20M2U	PVM-20M2E	

\* In this chapter, ☐ indicates the control items in the service mode.

Example: ☐ 60 H-FREQ

\* Before turning off the power after adjustment in the service mode, write the adjustment data. When the power is turned off before writing, adjusted data will all be lost.

### 3-3. Writing model data

1. Write model data on respective models in the service mode at the location of No.114 MODEL in accordance with Table 3-4.

Table 3-4

Model	Model data
PVM-20M4U	0
PVM-20M2U	1
PVM-20M4J	2
PVM-20M4E	3
PVM-20M2E	4
PVM-14M4U	5
PVM-14M2U	6
PVM-14M4J	7
PVM-14M1J	8
PVM-14M4E	9
PVM-14M2E	10
PVM-20M4A	11
PVM-14M4A	12
PVM-14M2A	13

2. Write the following data in the service mode at the location of No.115 COLOR TEMP DISP 1.  
COLOR TEMP DISP 1  
U/C, AEP 65  
J 93
3. Write the following data in the service mode at the location of No.116 COLOR TEMP DISP 2.  
COLOR TEMP DISP 2  
U/C, AEP 93  
J 65

\* Standard inspection state  
Unless otherwise specified in this manual, make adjustment under the following conditions:

APERTURE	MIN	(Turn FLAT fully counterclockwise.)
BRIGHT	50%	(Center click)
CHROMA	50%	(Center click)
PHASE	50%	(Center click)
CONTRAST	80%	(Center click)
VOLUME	50%	



### 3-4. Picture output

#### 1. AC input voltage setting

1. Input VIDEO signals and AUDIO signals to respective terminals on the connector panel.
2. Set the sliduck AC voltage as shown in Table 3-5.

Table 3-5

Group of models		Voltage
PVM-14M4J(J) PVM-14M1J(J)	PVM-20M4J(J)	AC 100±3V (Distortion factor:3% max.)
PVM-14M4U(U/C) PVM-20M2U(U/C)	PVM-14M2U(U/C) PVM-20M4U(U/C)	AC 120±3V (Same as above)
PVM-14M4E(AEP) PVM-14M2A(AUS) PVM-20M4E(AEP) PVM-20M4A(AUS)	PVM-14M2E(AEP) PVM-14M4A(AUS) PVM-20M2E(AEP)	AC 220±3V (Same as above)

### 3-5. Landing adjustment

1. CONT ... MAX  
BRT ... Conspicuous position
2. Roughly adjust the white balance, G2, and convergence.
3. Switch the rotary SW of the single color switch to change the color into green only.
4. Adjust the purity knob so that the green will come to the center of the screen. Make R and B almost identical. (Fig. 3-1)
5. Switch to B only, R only, and G only and verify each. (Figs.3-1, 3-2, and 3-3)
6. Bring the deflection yoke gradually forward and adjust the deflection yoke so that R and B on both sides of the screen will be green. (Fig.3-2 → Fig. 3-3)
7. If the deflection yoke comes forward too much, the pattern shown in Fig.3-4 will appear. If so, move the deflection yoke backward. (Fig.3-4 → Fig.3-3)
8. Switch the single color switch to B and verify the single color. (Fig.3-6)
9. Switch the single color switch to R and verify the single color. (Fig.3-9)
10. When two colors are mixed, set the mixed color as the standard, and repeat operations 6 and 7.
11. Switch to an all-white signal and check the uniformity.
12. When the deflection yoke position is determined, fasten it with the fixture.

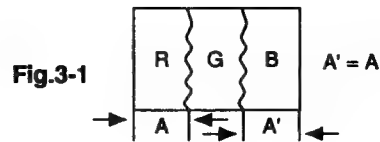


Fig.3-2

Fig.3-3

Fig.3-4

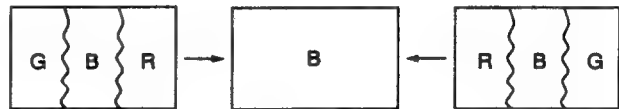


Fig.3-5

Fig.3-6

Fig.3-7



Fig.3-8

Fig.3-9

Fig.3-10

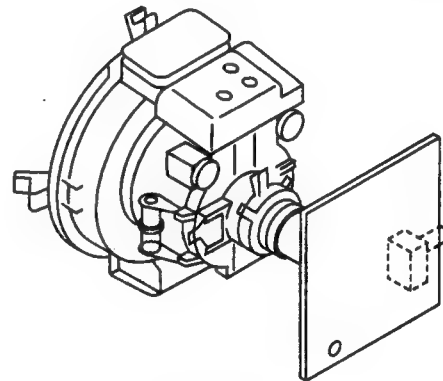


Fig.3-11

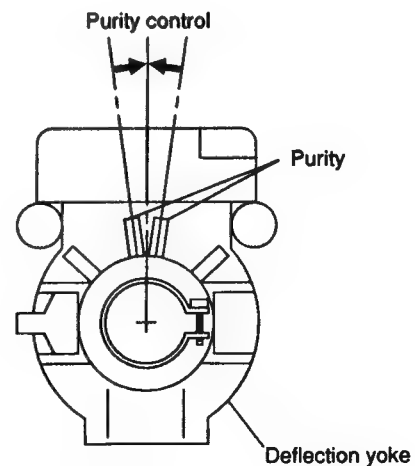


Fig.3-12



Note : Attach NTC magnets for 20M4 to the locations shown in Fig.3-13.

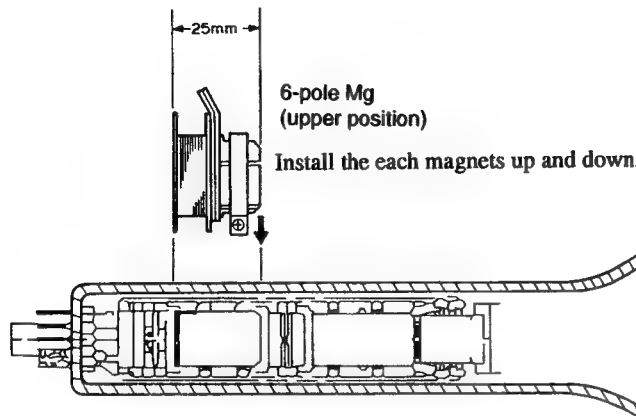


Fig. 3-13

### 3-6. Convergence adjustment (1)

1. Input a dot pattern signal.  
CONT ... Conspicuous position  
BRT ... MIN
2. Align the horizontal R, G, and B dots at the center of the screen with the H-START VR.  
\* When H-CENT is changed after H-STAT adjustment, readjust H-STAT. (H-STAT will change by means of H-CENT VR.)
3. Align the vertical location of R, G, and B in the center of the screen with the V-STAT Mg. (Fig.3-14, 3-15)  
\* After V-STAT adjustment, paint-lock the knob.

V-STAT Mg knob

While keeping the angles A and B equal ( $I = I'$ ), align the vertical convergence.

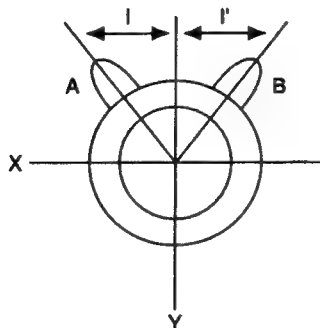


Fig. 3-14 Good example

If the A and B knobs are not symmetrical ( $I \neq I'$ ), the focus may deteriorate, beam striking or other adverse effects may occur.

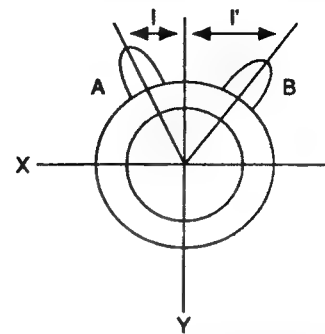


Fig. 3-15 Bad example

4. For HMC, use the BMC Mg to adjust the R and B dots so that they will be symmetrical horizontally with respect to the G dot.

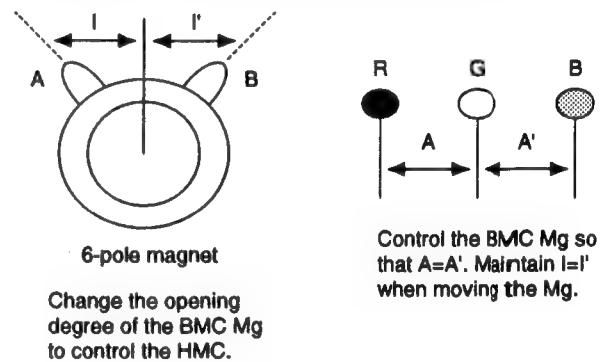


Fig. 3-16

5. For VMC, use the MBC Mg to adjust the R and B dots so that they will be symmetrical vertically with respect to the G dot.

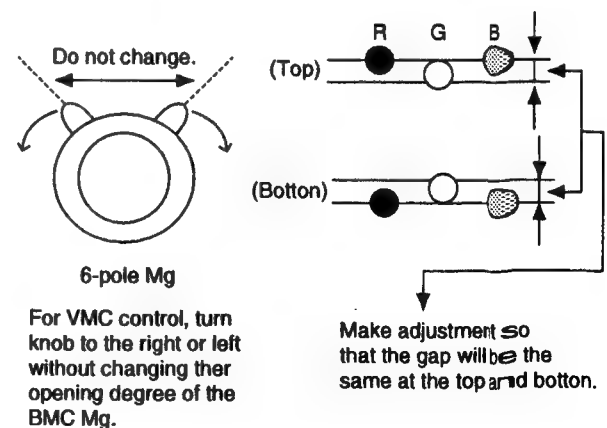


Fig. 3-17

6. Repeat adjustments 2. to 5.



- \* The above adjustment may affect the landing, so after adjustment, check the landing again.

7. Paint-lock the knobs after adjustment.

### 3-7. Deflection yoke neck rotation adjustment

1. If there is nonconvergence on both sides of the X or Y axis of the screen, turn the neck of the deflection yoke in the direction of the arrow to hold the nonconvergence for the entire CRT screen within the tolerance.

- \* Applicable only to groups of models 1, 2, 3, and 5.

- (1) Reverse cross misconvergence pattern
- (2) Regular cross misconvergence pattern

Move the deflection yoke downward.

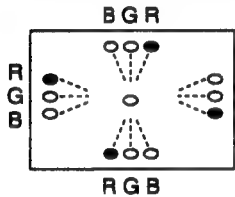


Fig. 3-18

Move the deflection yoke upward.

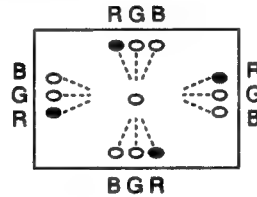


Fig. 3-19

- (3) Pattern of left-sided deflection yoke

Move the deflection yoke to the right when viewed from the CRT screen.

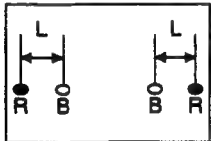


Fig. 3-20

- (4) Pattern of right-sided deflection yoke

Move the deflection yoke to the left when viewed from the CRT screen.

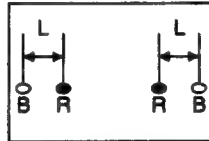


Fig. 3-21

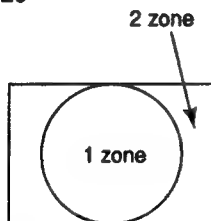


Fig. 3-23

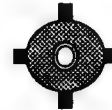
2. Turn the neck of the deflection yoke to align the V pin vertically.

- \* Applicable only to group of models 4.

3. Insert the wedge between the deflection yoke and CRT funnel to lock the deflection yoke. (Fig.3-24)



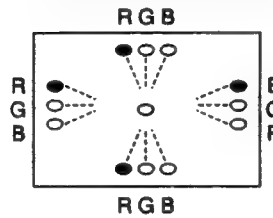
Groups of models 1,2,3,and 5 have been treated.



Group of models 4 have been treated.

Fig. 3-24

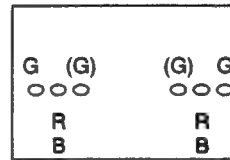
4. The following patterns cannot be corrected by turning the neck. (Figs.3-25, 3-26, and 3-27)



\* Gun rotation

The X-axis and Y-axis beams are distorted on both sides.

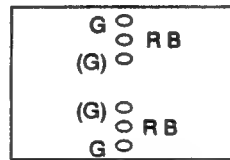
Fig. 3-25



\* HCR Large (Small)

The horizontal portion of the G raster is wider (narrower) than that of the RB raster on both sides of the screen.

Fig. 3-26



\* VCR Large (Small)

The vertical portion of the G raster is wider (narrower) than that of the RB raster on both sides of the screen.

Fig. 3-27

### 3-8. Convergence adjustment (2)

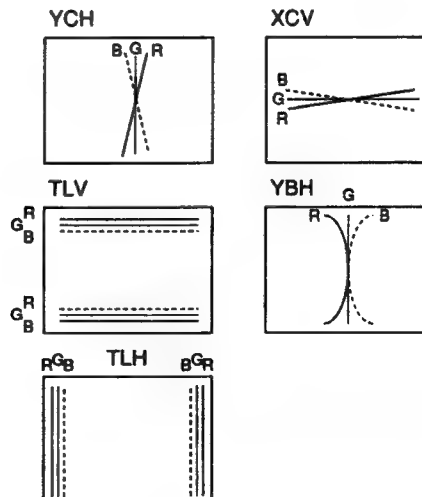


Fig. 3-28 Convergence compensation VR, coil, and compensator



Note : When adjustment is insufficient, use permalloy for perfect adjustment.

### 1. Group of models 4 (See Table 3-3.)

1. Input a cross-hatch signal.
2. Make adjustment with the TLV, YCH, YBH VR, and XCV coils of the deflection yoke to minimize nonconvergence.
3. When the nonconvergence of the TILT component is included in the horizontal convergence, make adjustment with the TLH compensator. (Fig.3-28)

### 2. Groups of models 1, 2, and 3 (See Table 3-3.)

1. Input a cross-hatch signal.
2. Make adjustment with the TLV, YCH VR, and XCV coils of the deflection yoke to minimize nonconvergence.
3. When the nonconvergence of the TILT component is included in the horizontal convergence, insert the TLH compensator into the deflection yoke for adjustment. (Fig.3-28)

### 3. Group of models 5 (See Table 3-3.)

1. Input a cross-hatch signal.
2. Make adjustment with the XCV coil of the deflection yoke to minimize nonconvergence.
3. When the nonconvergence of the TILT component is included in the vertical convergence, insert the TLV compensator into the deflection yoke for adjustment. (Fig.3-28)

## 3-9. G2 adjustment

1. Input a 525 monoscope signal.
2. Connect the probe of the oscilloscope to TP403 on the A board.
3. Measure the lowest reference pulse of the three.
4. Make adjustment with SCREEN VR so that the left end of the waveform will be 1.35 V $\pm$ 0.05 V.

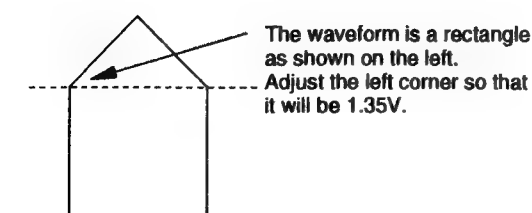
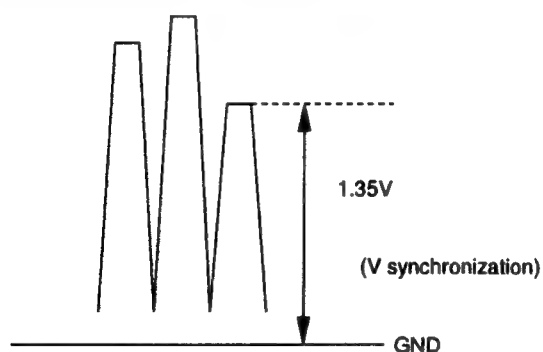


Fig. 3-29

## 3-10. White balance adjustment

1. Input a 525 monoscope signal. (Input from LINE A or B with no burst.)
2. Set as follows:  
CONT: 0%  
BRT: 50%
3. Adjust **SUB-BRIGHT** in the service mode so that the 20-tone gray scale will be as follows:  
0 and 5 IRE  $\rightarrow$  Cut off  
10 IRE  $\rightarrow$  Slight glow
4. Input 525 all-white (COMPOSITE signal without burst).
5. Set CONT VR to 80%.
6. Adjust the all-white luminance so that the screen luminance will be 3 NIT.
7. Press MENU and select COL TEMP/BAL.
8. Select 6500K.  
Set **[3200K SW]** to "0" for both 9300K and 6500K.
9. Put the unit into the service mode.
10. Adjust to the standard values with <RED> and <BLUE> of **[C/T1 6500K BIAS]** or **[C/T2 6500K BIAS]**.  
Set cut-off to 3 NIT.

<GREEN>

Group of models (Table 3-3)	Fix as follows:
2, 3, 5	"400"
1, 4	"512"

11. Switch the all-white signal luminance to 100 IRE.
12. Adjust to the standard values with <RED> and <BLUE> of **[C/T1 6500K GAIN]** or **[C/T2 6500K GAIN]**.  
<Green>  
Set it to "700"
13. Repeat adjustment (10, 11, and 12) until the adjustment is complete, and then write the adjustment data.
14. Press MENU and select COL TEMP/BAL.
15. Select 9300K.
16. Adjust **[C/T2 9300K BIAS]** **[C/T2 9300K GAIN]** or **[C/T1 9300K BIAS]** **[C/T1 9300K GAIN]** in the same manner as adjustments 1013.

BIAS <GREEN>

Group of models (Table 3-3)	Fix as follows:
2, 3, 5	"400"
1, 4	"512"

GAIN <GREEN>

Fix it at "700."



### 3-11. Blue-only white balance adjustment

1. Turn ON the blue-only of the user controller SW. (To set blue-only.)
2. Input all-white (COMPOSITE signal without burst).  
The all-white signal luminance shall be 100 IRE.  
CONT: 80%  
BRT: 50%
3. Select COL TEMP/BAL.
4. Select 6500K.
5. Adjust to the standard values with **C/T1 6500K B/O<RED>** and **C/T1 6500K B/O<GREEN>** or **C/T2 6500K B/O<RED>** and **C/T1 6500K B/O<GREEN>**.
6. Select COL TEMP/BAL.
7. Select 9300K.
8. Adjust to the standard values with **C/T2 9300K B/O<RED>** and **C/T2 9300K B/O<GREEN>** or **C/T1 9300K B/O<RED>** and **C/T1 9300K B/O<GREEN>**.
9. Adjust the all-white signal luminance, and check that the white balance is satisfactory when the luminance of the screen is 8NIT.

### 3-12. SUB BRT adjustment

1. Input a 525 monoscope signal.
2. CONT ... MIN  
BRT .... CENTER (50%)
3. Select **SUB BRIGHT** in the service mode.
4. Adjust **SUB BRIGHT** so that 10 IRE glows slightly and 0 IRE is cut off.

### 3-13. Focus adjustment

#### 1. PVM-20M4 Series

1. Adjust the H focus (upper side of focus pack) by means of a dot signal.
2. Adjust the V focus (lower side of focus pack) by means of a dot signal.
3. Turn the H focus fully clockwise when viewed from the front by means of a dot signal.
4. Turn the H focus counterclockwise and focus well the dot in the center of the screen. When the dot is well focused, it will be divided into two sections.
5. Turn the H focus VR clockwise (returning direction) so that the dot will be as shown in Fig.3-30. At that time, both ends of the central section of the screen are in the same state.



Fig. 3-30

6. Check that the resolution is more than 800 lines by means of a digital monoscope signal.
7. Check that the magenta ring is un conspicuous by means of an all-white signal.

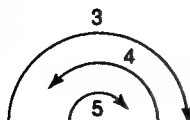


Fig.3-31 Movement of VR when viewed from the front

#### 2. PVM-14M4 Series

1. Adjust the H focus (upper side of focus pack) by means of a dot signal.
2. Adjust the V focus (lower side of focus pack) by means of a dot signal.
3. Turn the H focus fully clockwise when viewed from the front by means of a dot signal.
4. Turn the H focus counterclockwise and focus the dot in the center of the screen well. The dot signal is divided into two sections at that time.
5. Turn the H focus VR counterclockwise so that the dot will be as shown in Fig.3-32. At that time, both ends of the central section of the screen are in the same state.



Fig. 3-32

6. Check that the resolution is more than 800 lines by means of a digital monoscope signal.
7. Check that the magenta ring is un conspicuous by means of an all-white signal.

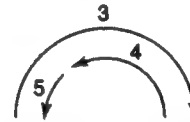


Fig.3-33 Movement of VR when viewed from the front

#### 3. PVM-14M2 Series (CRT14MG)

Make adjustment so that the dots in the central section (right and left edges) will be undivided, respectively. (When well-focused, the dot is divided into two sections.)

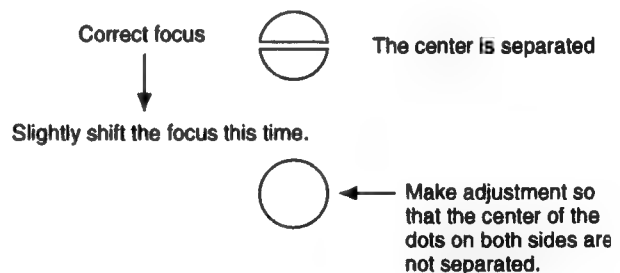


Fig. 3-34

#### 4. PVM-20M2 Series

Focus the character "30" in the center of monoscope well as usual.



## SECTION 4

### SAFETY RELATED ADJUSTMENT

When the parts (with a  $\boxtimes$ ,  $\boxdot$  mark on the circuit diagram) shown below are replaced, confirm the matters described in items 4-1 and 4-2 shown below.

$\boxtimes$  R1536

$\boxdot$  R551, R506, R519, R518, R516, R515, R508, R517, R1560, R1537, C549, C512, C513, C523, C592, D501, D533, Q500, Q511, IC500, and IC507

When the following parts are replaced, check the +B voltage: IC600, IC602, D610, C615, C631, C621, C632, and T603

#### Confirmation procedure

1. Input 120 VAC.
2. Input a monoscope signal, and minimize CONTRAST and BRIGHT.
3. Check that the voltage of the CN605 ④ pin is 115.7 VDC.

#### 4-1. CONFIRMATION OF +B MAXIMUM

Standard : Less than 115.7 VDC (CN605 pin ④)

Check Condition Input voltage : 130 VAC

Note : Use NF Power Supply or make sure that distortion factor is 3% or less.

Input signal : Monoscope

Controls : BRT & CONT → Normal

#### 4-2. CONFIRMATION OF HOLD-DOWN CIRCUIT

Check Condition Input voltage : 130 VAC

Input signal : White & Dot

Controls : BRT & Cont → Max. & Min.

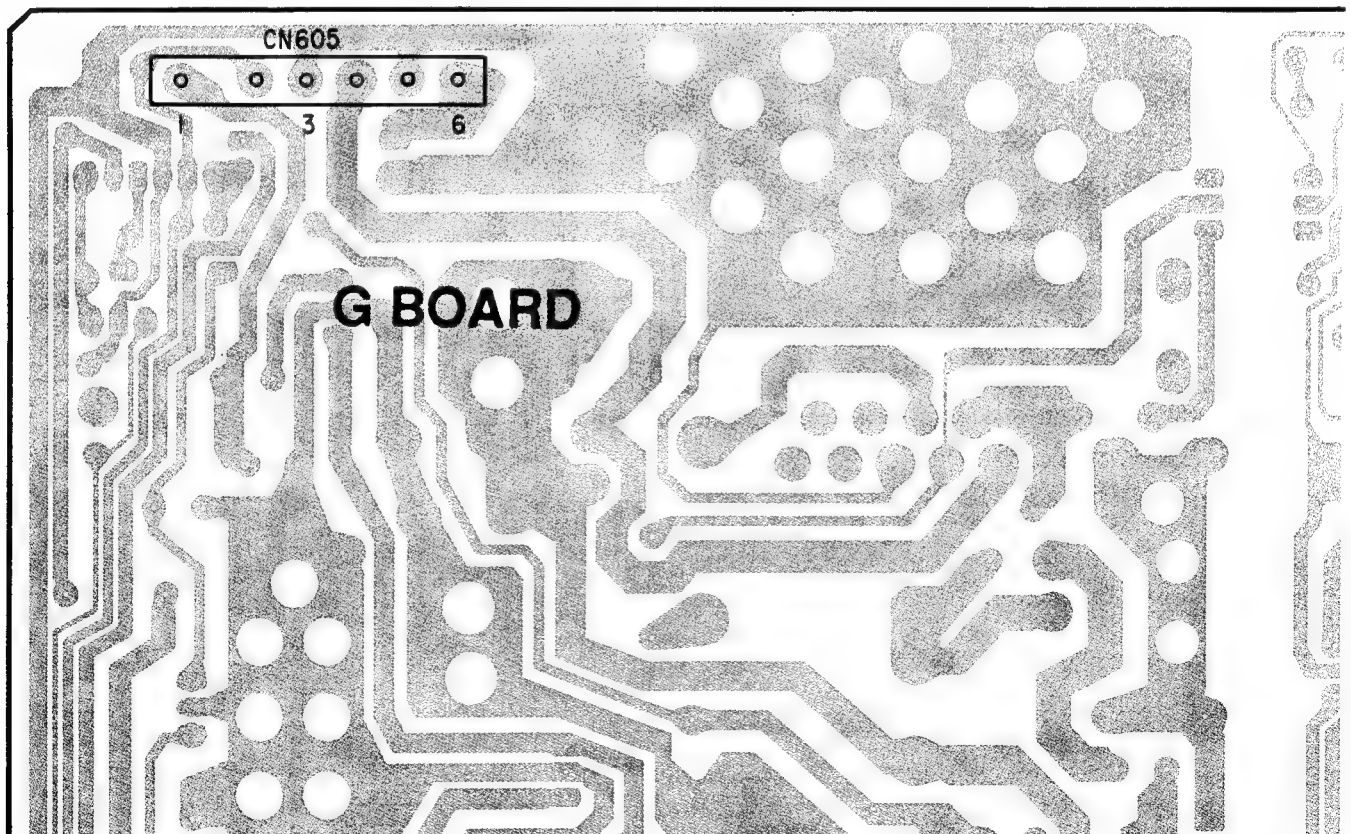
##### 4-2-1. Hold-Down Circuit (+B)

- a) Adjust the beam current to  $600 \pm 50 \mu\text{A}$  with the pin ④ of CN605 with the external DC power supply (less than 127.0 VDC) to the point just before the hold-down circuit works.  
Input Signal : White
- b) Adjust the beam current to  $80 \pm 20 \mu\text{A}$  with the pin ④ of CN605 with the external DC power supply (less than 127.0 VDC) to the point just before the hold-down circuit works.  
Input Signal : Dot

##### 4-2-2. Hold-Down Circuit (3rd Wire voltage of FBT)

Check item : Check of pin ⑪ of IC500 voltage : more than 110.0 VDC

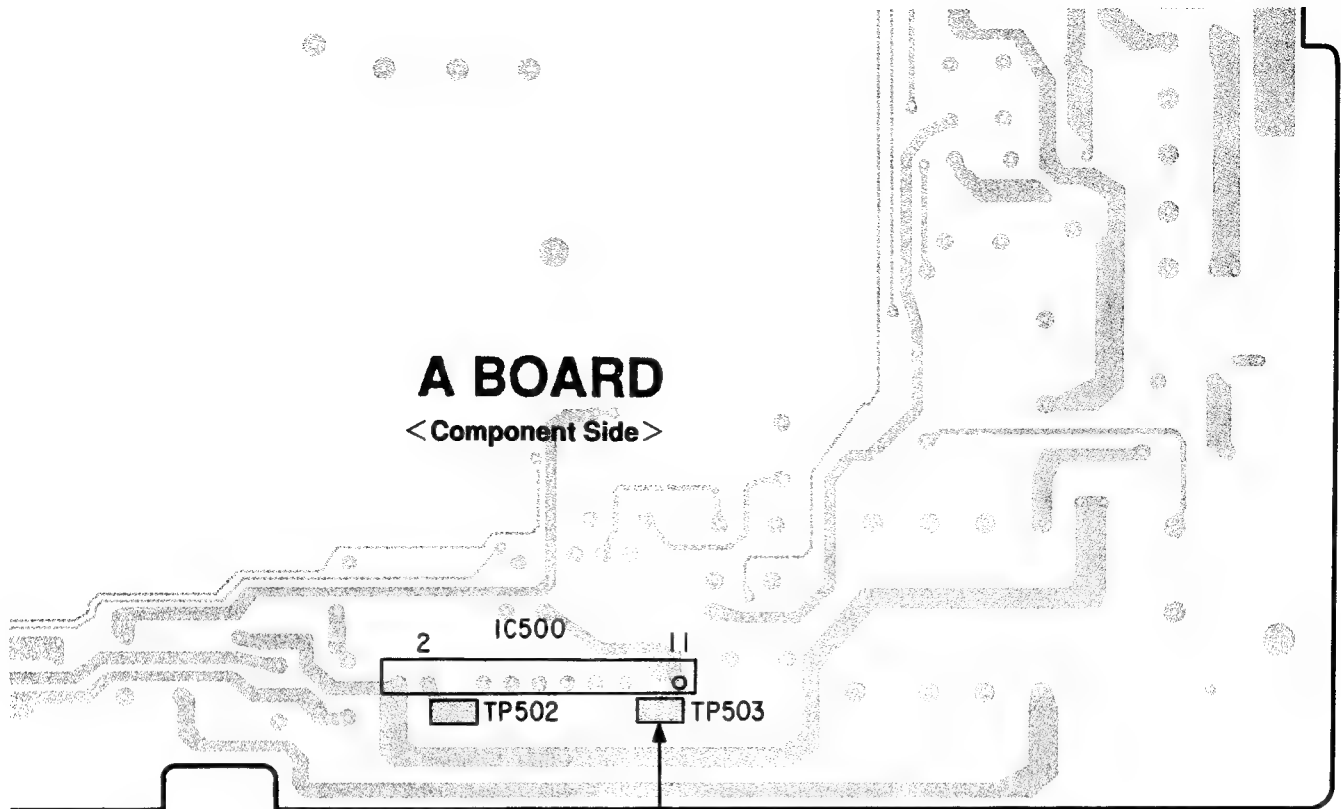
- a) Adjust the beam current to  $600 \pm 50 \mu\text{A}$  with the pin ⑪ of IC500 with the external DC power supply (less than 141.0 VDC) to the point just before the hold-down circuit works.  
Input Signal : White
- b) Adjust the beam current to  $80 \pm 20 \mu\text{A}$  with the pin ⑪ of IC500 with the external DC power supply (less than 141.0 VDC) to the point just before the hold-down circuit works.  
Input Signal : Dot



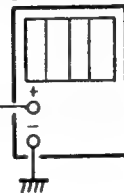


## A BOARD

<Component Side>

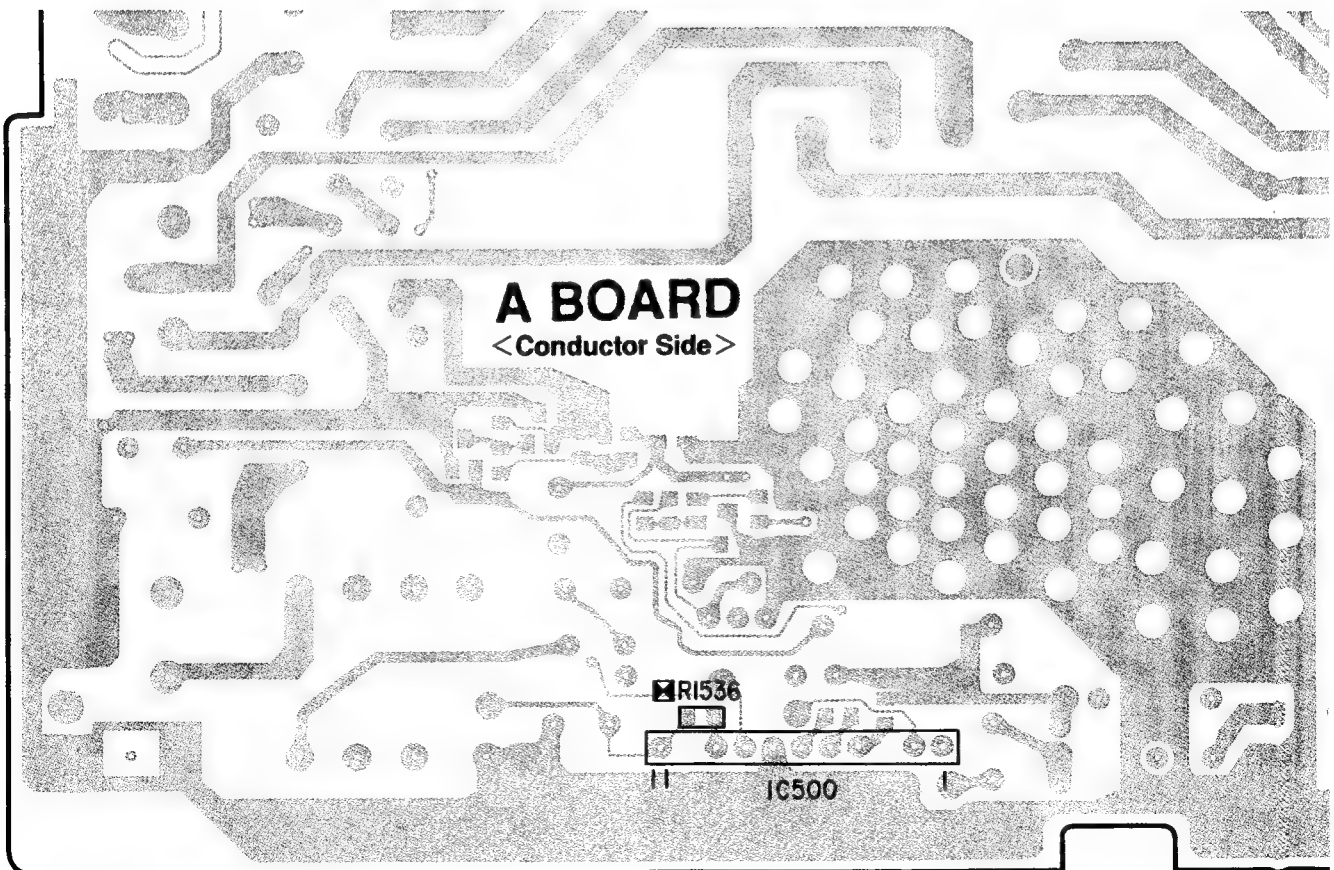


digital multimeter



## A BOARD

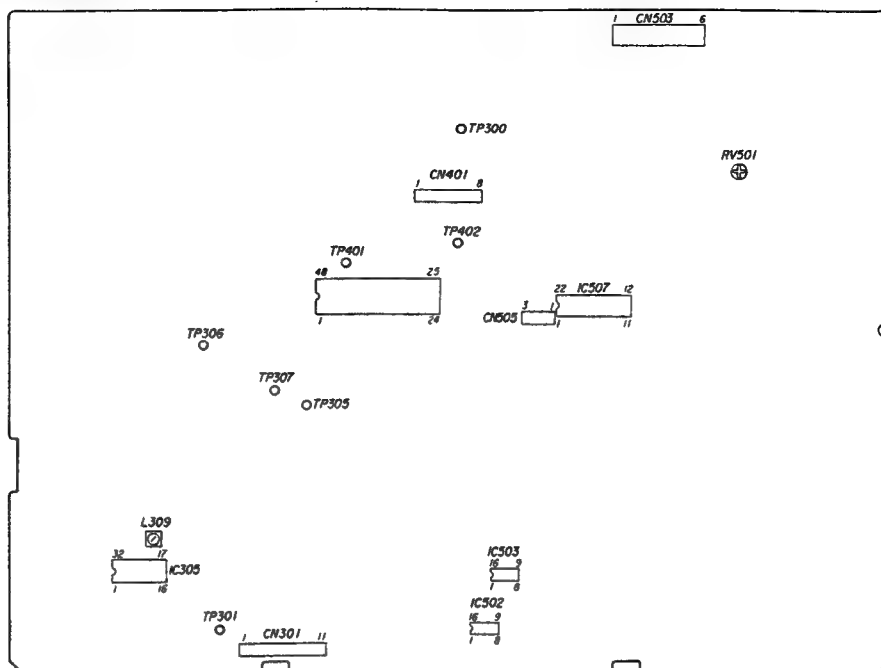
<Conductor Side>





## SECTION 5 CIRCUIT ADJUSTMENTS

### 5-1. A BOARD ADJUSTMENT



#### 1. PREPARATION/SIGNAL SPECIFICATIONS

##### 1. Signal specifications

- \* Supply a composite video or component signals from the CN301 connector. Refer to Table 5-1 to take into consideration the effect on the Q board.

The level of the signal to supply should equal to values shown in Table 5-1 plus/minus 2% max.

**Table 5-1**

Signal		Details of signal	Standard level (Pedestal white)	Reduction rate %	Connector supply level (P-W)
Composite video (75% color bar)	358NT 443NT	100% white	0.714V	93%	0.664V
		75% white	0.536V	♦	0.498V
		Burst (Green section) (P-P for this item only)	286mV (632mV)	94% (94%)	269mV (594mV)
	PAL SECAM PAL M	100% white	0.7V	♦	0.651V
		75% white	0.525V	♦	0.488V
		PAL burst (Green section) (P-P for this item only)	300mV (664mV)	94% (94%)	282mV (624mV)
Component (75% color bar)	BETA 0	100% white	0.7V	94.8%	0.664V
		75% white	0.525	♦	0.498V
		75% color B-Y, R-Y (P-P for this item only)	0.7V	♦	0.664V
	SMPTE	100% white	0.7V	♦	0.664V
		75% white	0.525V	♦	0.498V
		75% color B-Y, R-Y (P-P for this item only)	0.525	♦	0.498V

##### 2. Preparation

- \* In this chapter,    indicates the control items in the service mode.

Example: 60 H-FRQ

Write the applicable model data at the location of NO.114 MODEL in the service mode.

Group of models 4 ... 0

Group of models 5 ... 1

Group of models 1 ... 5

Group of models 2 ... 6

Group of models 3 ... 8

- \* Refer to Table 5-2 for the following groups of models.

**Table 5-2**

Group of models	Models		
1	PVM-14M4U PVM-14M4A	PVM-14M4J	PVM-14M4E
2	PVM-14M2U	PVM-14M2E	PVM-14M2A
3	PVM-14M1J		
4	PVM-20M4U PVM-20M4A	PVM-20M4J	PVM-20M4E
5	PVM-20M2U	PVM-20M2E	

- \* CONT 80% is the center click position of the user controller.

#### 2. ADJUSTMENT OF DEFLECTION SYSTEM

##### 1. Adjustment of horizontal oscillation frequency

1. Input a 525 monoscope signal.
2. CONT ... 80%  
BRT .... 50%
3. Set the unit in the service mode.



4. Connect the IC507 ① PIN on the A board to GND via the 100 $\mu$ /16V chemical capacitor. (Use CN505 ③ PIN for GND.) Or insert the H-FREQ jig into CN505.

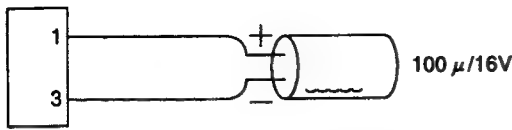


Fig.5-1 H-FREQ jig

5. Adjust **[60 H-FREQ]** so that the slanting lines on the screen will be vertical. (Fig.5-2)
6. Input a 625 monoscope signal.
7. Adjust **[50 H-FREQ]** so that the slanting lines on the screen will be vertical. (Fig.5-2)

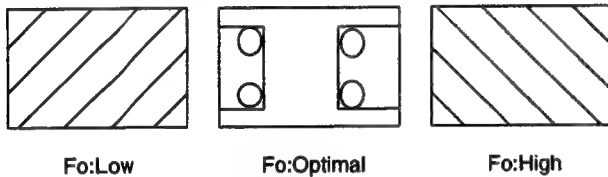


Fig.5-2

## 2. H BLANKING adjustment

1. Input a 525 monoscope signal.
2. CONT ... 80%  
BRT ... 50%
3. Set the unit in the service mode.
4. Observe the anode of TP300 or D516 with an oscilloscope, and adjust **[H-BLANKING]** so that the waveform will be as shown in Fig.5-3.

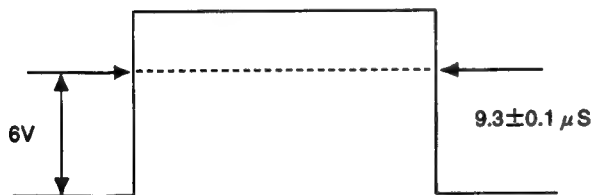


Fig.5-3

## 3. Picture phase adjustment

1. Input a 525 monoscope signal.
2. Set the unit in the UNDER SCAN mode.
3. CONT ... Min.  
BRT ... Max.
4. Set the unit in the service mode.
5. Adjust **[UN H-SIZE]** so that the white frame of the monoscope will be approx. 1 cm to the inside of the effective screen.
6. Turn RV501 (H-CENT) so that B = B'.
7. Adjust **[60 VIDEO PHASE]** so that the signal area will be in the center (A = A') of the deflection area. (Fig.5-4)
8. Input a 625 monoscope signal.
9. Adjust **[50 VIDEO PHASE]** in the same manner.

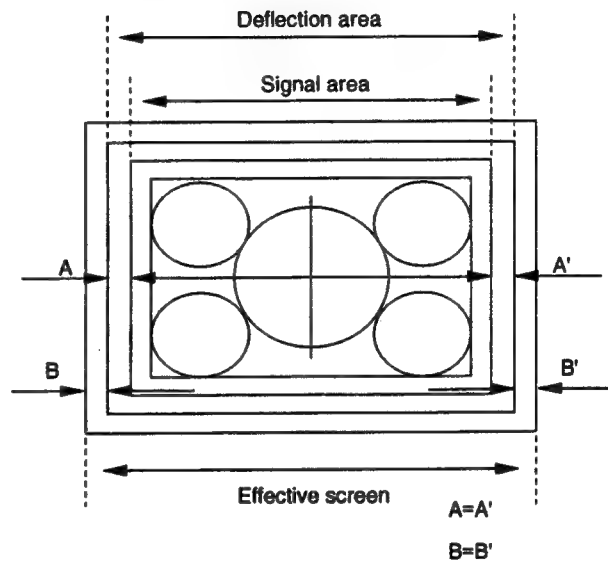


Fig.5-4

## 4. V BLANKING adjustment

1. Input a 525 monoscope signal.
2. Set the unit in the UNDER SCAN mode.
3. CONT ... Min.  
BRT ... Max.
4. Set the unit in the service mode.
5. Adjust **[V-BLANKING <60>]** so that the white frame in the upper section of the monoscope will be about to be blanked.

Note : Blanking up to the point 1H away from the white frame is permissible, but the adjusting center should be up to the point 0.5H away from the frame.

6. Cancel the UNDER SCAN mode, and set the unit in the normal 16:9 mode.
7. Adjust **[16:9 BLANKING START <60>]** and **[16:9 BLANKING END <60>]** so that the number of frames in the vertical direction in the luminous section of the screen will be 11.74 and the BLK quantity at the top and bottom will be the same.

Note : Make adjustment before 16:9 V-SIZE adjustment.



8. Input a 625 monoscope signal.
9. In the same way as 5. shown above, adjust **V-BLANKING <50>**.
10. Adjust **16:9 BLANKING START <50>** and **16:9 BLANKING END <50>**, in the same way as 6. and 7., so that the number of frames in the vertical direction in the luminous section of the screen will be 11.2 and the BLK quantity at the top and bottom will be the same.

#### 5. Vertical deflection adjustment

1. Input a 525 monoscope signal.
2. CONT ... 80%  
BRT ... 50%
3. Set the unit in the service mode.
4. Roughly adjust **NOR 60 V.SIZE** so that the size will be 12 frames.  
Adjust V.LIN with **V.LIN**.  
Adjust CENT with **V.CENT**.  
V.CENT must be reviewed after adjustment of V.LIN.  
Adjust **NOR 60 V.SIZE** so that it will equal the standard value.
5. Set the unit in the 16:9 mode by the user controller SW.
6. Make the same adjustment with **16:9 NOR V.SIZE <60>**.
7. Set the unit in the NORMAL SCAN mode.
8. Input a 625 signal.
9. Adjust **NOR 50 V.SIZE** so that the SIZE will equal the standard value.
10. Set the unit in the 16:9 mode.
11. Adjust **16:9 NOR V.SIZE <50>** so that it will equal the standard value.

Table 5-3 NORMAL V. SIZE standard

		525	625
4 : 3		11.75±0.2 frames	11.2±0.2 frames
16 : 9	14"	154mm	←
	20"	217mm	←

#### 6. Horizontal deflection adjustment (Normal scan adjustment)

1. Input a 525 monoscope signal.
2. CONT ... 80%  
BRT .... 50%
3. Set the unit in the service mode.
4. Rough adjustment of H.SIZE  
Roughly adjust **NOR H.SIZE** so that H.SIZE will be 15.75 frames.
5. Adjust the horizontal deflection by means of **NOR PIN AMP**, **NOR PIN PHASE**, **NOR U.PIN AMP**, **SEXY**, **V BOW**, **V ANGL**, **NOR H SIZE**, **L PIN AMP**, and **L V BOW**.  
(While correcting a distorted parallelogram and curvature with V.ANGL and BOW, make adjustment so that the horizontal and vertical lines of the screen will be straight.)
6. Set the unit in the 16:9 mode.
7. Make the same adjustment as 5. with **16:9 NOR PIN AMP** and **16:9 NOR PIN PHASE**

Table 5-4 NORMAL H. SIZE standard

	525	625
4 : 3	11.75±0.2 frames	15.0±0.2 frames
16 : 9	11.75±0.2 frames	15.0±0.2 frames

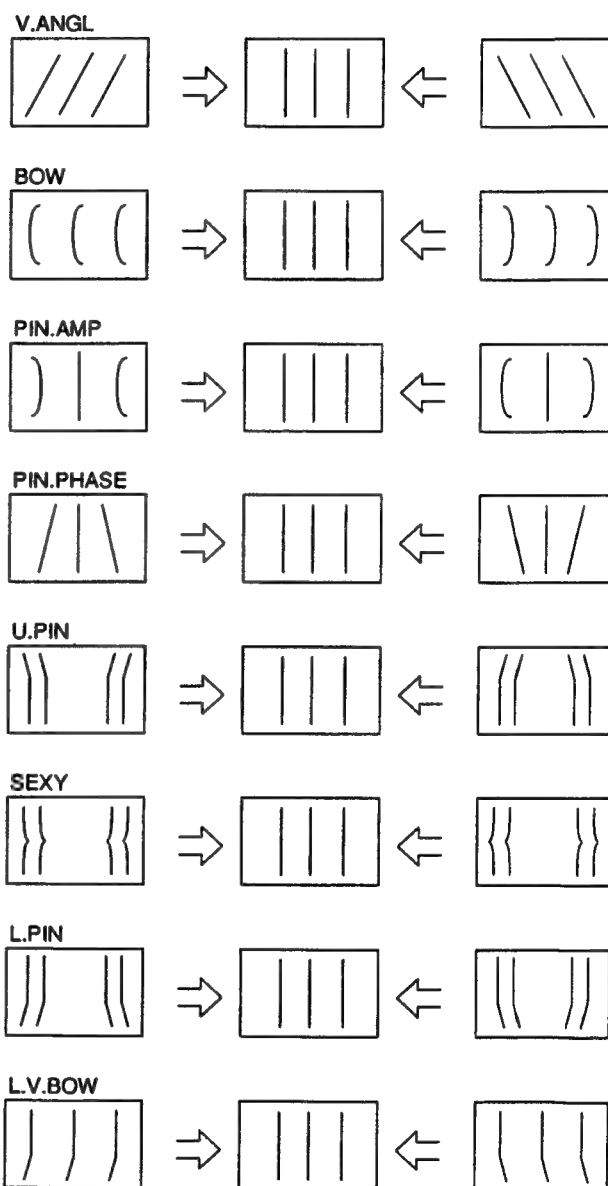


Fig.5-5



## 7. Horizontal deflection adjustment (UNDER SCAN adjustment)

1. Input a 525 monoscope signal.
2. CONT ... 80%  
BRT .... 50%
3. Set the unit in the U/S mode.
4. Set the unit in the service mode.
5. Adjust **[U/S V SIZE <60>]** so that UNDER V.SIZE will be within the standard.
6. Adjust **[U/S H SIZE]** so that UNDER H.SIZE will be within the standard.
7. Adjust **[U/S PIN AMP]** and **[U/S PIN-PHASE]**. (Adjust tracking according to 5., 6., and 7.)
8. After adjustment, the white frame of the monoscope shall not be out of the effective screen.
9. Set the unit in the 16:9 mode.
10. Make the same adjustment with 5. and 7. by means of **[16:9 U/S V SIZE <60>]**, **[16:9 U/S PIN-AMP]** and **[16:9 U/S PIN-PHASE]**.

Table 5-5

Standard values for groups of models 1, 2, and 3 (14")

	525	625
U/S H-SIZE	252mm	←
V-SIZE	188mm	←
16:9 U/S V-SIZE	142mm	←

Table 5-6

Standard values for groups of models 4 and 5 (20")

	525	625
U/S H-SIZE	364mm	←
V-SIZE	272mm	←
16:9 U/S V-SIZE	205mm	←

11. Set the unit in the 16:9 mode.
12. Input a monoscope signal.
13. Make the same adjustment with 5. by means of **[U/S V SIZE <50>]**.
14. Set the unit in the 16:9 mode.
15. Make the same adjustment with 5. by means of **[16:9 U/S V SIZE <50>]**.

Note : If there is not time enough for adjustment (5. Vertical deflection adjustment and 6. and 7. Horizontal deflection adjustment), confirm that the respective sections will operate normally and that adjustment is possible, and then input standard adjustment values.

## 8. H/V-DELAY adjustment

Note : This item applies only to groups of models 1, 2, 4, and 5.

### 8-1. H-DELAY adjustment

- 1) Input a 525 monoscope signal.
- 2) CONT ... 80%  
BRT .... 50%
- 3) Set the unit in the H/V DELAY mode.
- 4) Set the unit in the service mode.
- 5) Connect the probe of an oscilloscope to IC503 ⑦ PIN. Adjust **[H DELAY]** so that the output waveform will be as shown in Fig.5-6.

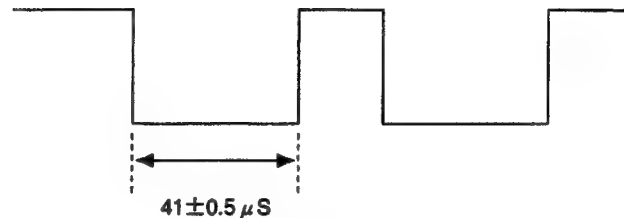


Fig.5-6

### 8-2. V-DELAY adjustment

- 1) Input a 525 monoscope signal.
- 2) CONT ... 80%  
BRT .... 50%
- 3) Set the unit in the H/V DELAY mode.
- 4) Set the unit in the service mode.
- 5) Connect the probe of an oscilloscope to IC502 ⑦ PIN. Adjust **[V DELAY]** so that the output waveform will be as shown in Fig.5-7.

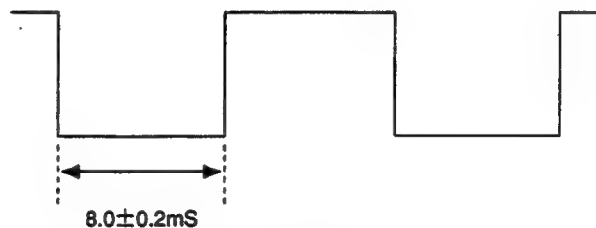


Fig.5-7



### 8-3. Confirmation of screen

Confirm that the screen is as shown in Fig.5-8.

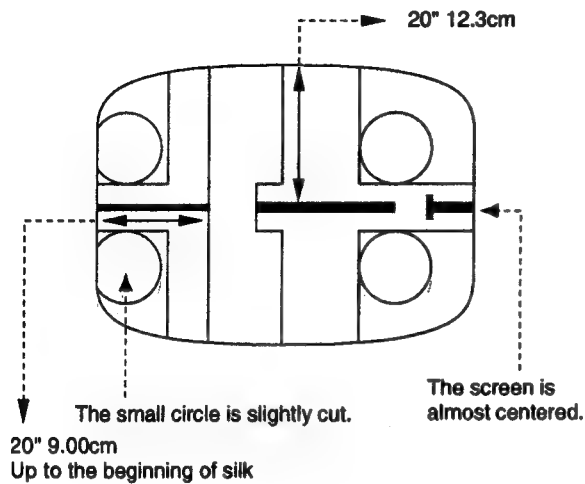


Fig.5-8

### 9. Writing adjustment results

Write the adjustment results.

Note : Do not turn off the power before writing the adjustment results; otherwise, they will all be lost.

### 3. Signal system adjustment

#### 1. SUB CON adjustment during NORM and H/V DL

Note : H/V-DL is not applicable to the group of models 3.  
Adjustment must be completed before the HUE adjustment of NTSC358/443.PAL.

##### 1. Input a vertical white line signal.

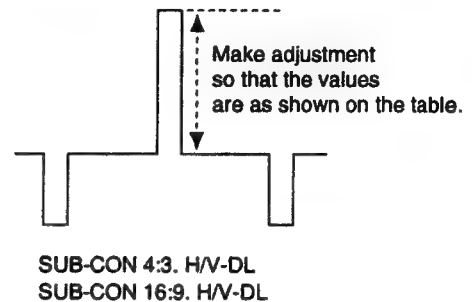
Note : Use a vertical white line signal (without 525 burst; H width of 3μS; 100IRE).

- CONT ... 80%  
BRT .... 50%
- Connect the probe of an oscilloscope to CN401 ③ PIN on the A board.
- Set the unit in the service mode.
- Temporarily input "69" as an adjustment value for SUB.BRIGHT. Set the values in Table 5-7 as BIAS and GAIN data of C.TEMP1 and C.TEMP2.

Table 5-7

Group of models	1, 4	2, 3, 5
BIAS GREEN	512	400
GAIN GREEN	700	700

- Adjust the pedestal or the distance between SYNCTIP and WHITE by means of **SUB CON <4:3, NOR>**, **SUB CON <16:9, H/V DELAY>**, **SUB CON <16:9, NOR>**, and **SUB CON <4:3, NOR>**.  
SUB CON <4:3, NOR>  
SUB CON <16:9, NOR> (Fig.5-9)

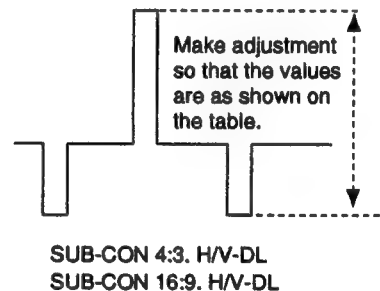


SUB-CON 4:3. H/V-DL  
SUB-CON 16:9. H/V-DL

Group of models	4	1	5	2	3
4 : 3	1.39Vp-p	1.16Vp-p	1.37Vp-p	1.47Vp-p	1.47Vp-p
16 : 9	1.22Vp-p	1.04Vp-p	1.19Vp-p	1.32Vp-p	1.32Vp-p

Fig. 5-9

SUB CON <4:3. H/V DELAY>  
SUB CON <16:9. H/V DELAY> (Fig.5-10)



SUB-CON 4:3. H/V-DL  
SUB-CON 16:9. H/V-DL

Group of models	4	1	5	2
4 : 3	1.39Vp-p	1.16Vp-p	1.37Vp-p	1.47Vp-p
16 : 9	1.22Vp-p	1.04Vp-p	1.19Vp-p	1.32Vp-p

Fig. 5-10

Note : Not applicable to PVM-14M1J



## 2. SUB PHASE adjustment

Note : Not applicable to the group of models 3.

1. Input a component color bar (R-Y) and EXT SYNC. (BETA 0 level signal)
2. Set the unit in the EXT SYNC mode for component input.
3. Connect the probe of an oscilloscope to IC404 ⑩ PIN or TP402.
4. Set the unit in the service mode.
5. Adjust **[SUB PHASE]** so that the output waveform will be minimum (15 mVp-p or less). (Fig.5-11)

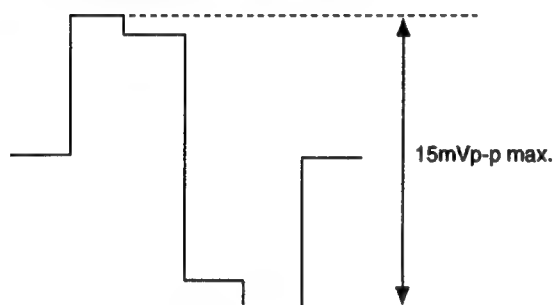


Fig. 5-11

## 3. SUB PHASE adjustment

Note : Not applicable to groups of models 1, 2, 4, and 5.

1. Input an NTSC color bar.
2. Connect L309 to GND and TP307 to 5V line (L320 line), respectively.
3. Set the unit in the service mode.
4. Adjust **[SUB PHASE]** so that the output waveform will be minimum (15 mVp-p or less). (Fig.5-11)

## 4. SUB CHROMA adjustment

Note : Not applicable to the group of models 3.

1. Input component color bars (R-Y, Y, and B-Y). (BETA 0 level signal)
2. Set COMPONENT LEVEL to BETA 0 via MENU.
3. Connect the probe of an oscilloscope to IC404 ⑩ PIN or TP402.
4. Set the unit in the service mode.
5. Adjust **[SUB CHROMA NORMAL]** so that the peaks of waveforms will be flush with each other as shown in Fig.5-12.

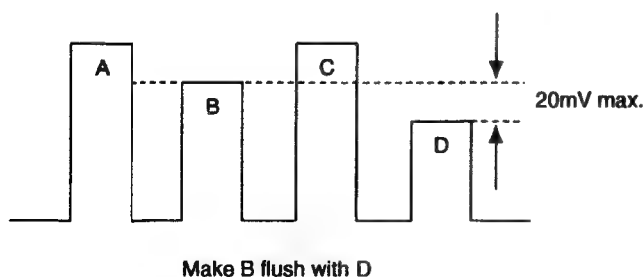


Fig. 5-12

## 5. SUB COL adjustment

Note : Not applicable to groups of models 1, 2, 4, and 5.

1. Set the unit in the service mode.
2. Input adjustment value 98 to **[SUB CHROMA NORMAL]**. (Fig.5-12)

## 6. R-Y LEVEL adjustment

Note : Not applicable to the group of models 3.

1. Input component color bars (R-Y, Y, and B-Y). (BETA 0 level signal)
2. Set COMPONENT LEVEL to BETA 0 via MENU.
3. Connect the probe of an oscilloscope to IC404 ⑩ PIN or TP401.
4. Set the unit in the service mode.
5. Adjust **[R-Y LEVEL COMPONENT]** so that the peaks of waveforms will be flush with each other as shown in Fig.5-13.

Make adjustment so that B = D as shown above. (20 mV max.)  
Check that the difference between B and C is 30 mV or less.

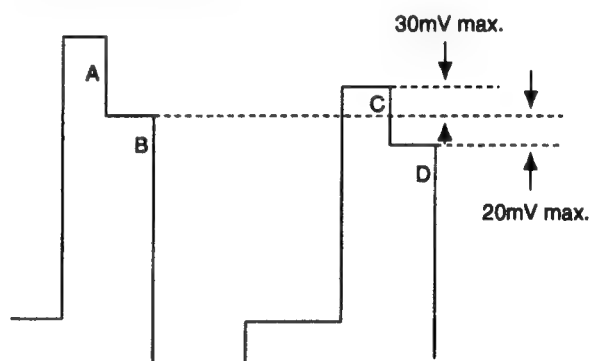


Fig. 5-13

## 7. SUB CHROMA N10/SMPTE

Note : Not applicable to the group of models 3.

1. Input component color bars (R-Y, Y, and B-Y). (SMPTE level signal)
2. Set COMPONENT LEVEL to N10/SMPTE via MENU.
3. Connect the probe of an oscilloscope to IC404 ⑩ PIN or TP402.
4. Set the unit in the service mode.
5. Adjust **[SUB CHROMA SMPTE]** so that the levels of B and D will be the same. (Fig.5-14)

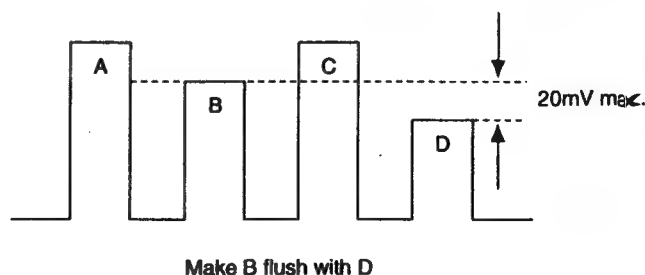


Fig. 5-14



## 8. Adjustment of burst gate pulse width

1. Input an NTSC color bar.
2. Connect the probe of an oscilloscope to TP301 (COMP-SYNC) and Q363 (E) or IC305 ① PIN. (Exercise care since IC305 (1) PIN is a high-impedance line.)
3. Set the unit in the service mode.
4. Adjust **BGP WIDTH** so that the output waveforms will be as shown in Fig. 5-15.

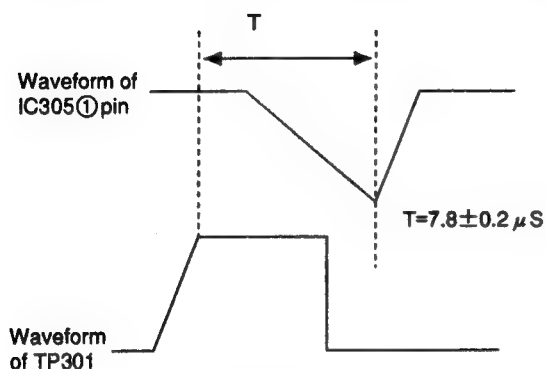
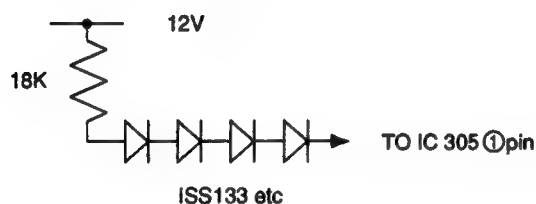


Fig. 5-15

## 9. VXO adjustment

- 9-1. X'tal 358
  - 1) Input an NTSC color bar.
  - 2) Connect a frequency counter to IC305 ② PIN.
  - 3) Set the unit in the service mode.
  - 4) Connect IC305 ① PIN as shown in Fig. 5-16.
  - 5) Adjust **NTSC CRYSTAL** so that the counter reading will be within the standard values shown below. (Adjustment may be made at a point at which the color flickering stops.)

X'tal 358 standard value: 3579545±20 Hz



(Arrange 4 Di's as close as possible to ①PIN at the shortest possible distance.)

Fig. 5-16

## 9-2. X'tal 443

- 1) Input a 443 NTSC color bar.
  - 2) Connect a frequency counter to IC305 ② PIN.
  - 3) Set the unit in the service mode.
  - 4) Connect IC305 ① PIN in the same way as 9.-4) in 9. VXO adjustment.
  - 5) Adjust **NTSC 443 CRYSTAL** in the same way as 9.-5) in 9. VXO adjustment.
- X'tal 443 standard value: 4433619±20 Hz

## 10. NTSC - NTSC443 - PAL color demodulation adjustment

Note : 10-1. is not applicable to the group of models 3.

### 10-1. NT358PHASE (NORMAL)

- 1) Input an NTSC color bar.
- 2) Connect the probe of an oscilloscope to TP306.
- 3) Set the unit in the H/V DELAY mode.
- 4) Set the unit in the service mode.
- 5) Adjust **PHASE NTSC 358 NOR** so that the burst section of the output waveform will be straight. (Fig. 5-17)

### 10-2. NT 358 PHASE (ACC OFF)

- 1) Conduct ACC OFF via MENU.
- 2) Make adjustment in the same way as 10-1. shown above by means of **PHASE NTSC 443 ACC OFF**. (Fig. 5-17)

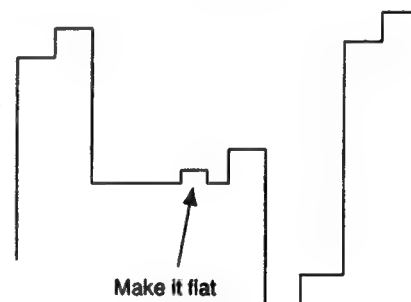


Fig. 5-17

### 10-3. NT 358 B-Y PHASE

Note : Make adjustment after PHASE adjustment and before CHROMA adjustment.

- 1) Input an NTSC color bar. (Input only the R-Y component. B-Y and Y should be OFF.)
- 2) Connect the probe of an oscilloscope to TP305.
- 3) Set the unit in the service mode.
- 4) Adjust **B-Y PHASE NTSC 358** so that the color components will be straight.

### 10-4. NT 358 CHROMA (NORMAL)

- 1) Input an NTSC color bar.
- 2) Connect the probe of an oscilloscope to IC404 ③ PIN or TP402.
- 3) Set the unit in the service mode.
- 4) Adjust **CHROMA NTSC 358 NOR** so that the peaks of waveforms will be flush with each other as shown in Fig. 5-18.



#### 10-5. NT 358 CHROMA (ACC OFF)

Note : 10-5. is not applicable to the group of models 3.

- 1) Conduct ACC OFF via MENU.
- 2) Adjust **CHROMA NTSC 358 ACC OFF** in the same way as 10-4. shown above. (Fig.5-18)

IC404 ④ PIN

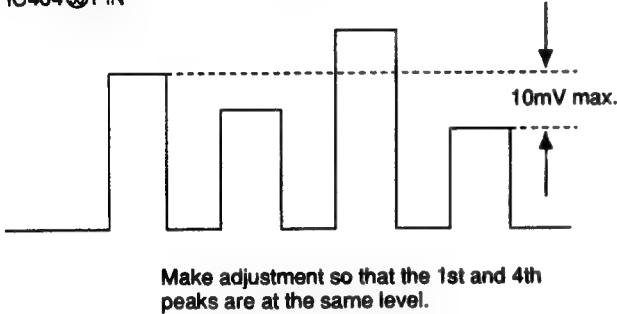


Fig. 5-18

#### 10-6. NTSC 358 R-Y LEVEL

Note : Be sure to set ACC in the ON position before this adjustment.

- 1) Input an NTSC 358 color bar.
- 2) Connect the probe of an oscilloscope to IC 404 ④ PIN or TP401.
- 3) Set the unit in the service mode.
- 4) Adjust **R-Y LEVEL NTSC 358** so that the peaks of waveforms will be flush with each other as shown in Fig.5-19.

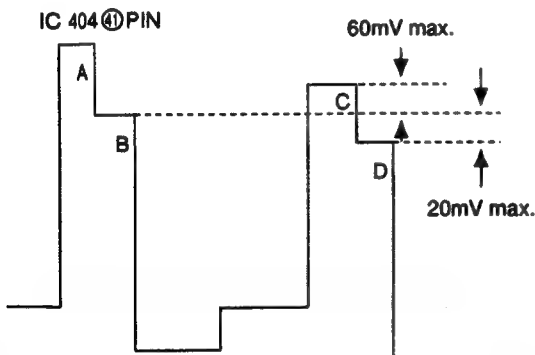


Fig. 5-19

#### 10-7. NTSC 443 PHASE (NORMAL)

Note : 10-7-3). is not applicalbe to the group of models 3.

- 1) Input an NTSC 433 color bar.
- 2) Connect the probe of an oscilloscope to TP306.
- 3) Set the unit in the H/V DELAY mode.
- 4) Set the unit in the service mode.
- 5) Adjust **PHASE NTSC 443 NOR** so that the burst section of the output waveform will be straight. (Fig.5-20)

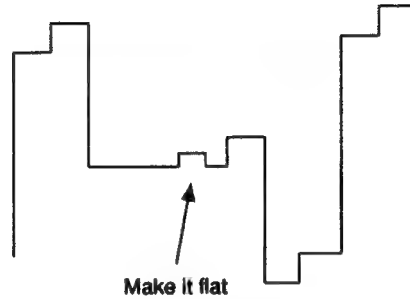


Fig. 5-20

#### 10-8. NTSC 443 PHASE (ACC OFF)

Note : 10-8. is not applicable to group of models 3.

- 1) Conduct ACC OFF via MENU.
- 2) Adjust **PHASE NTSC 443 ACC OFF** in the same way as 10-7-5). (Fig.5-21)

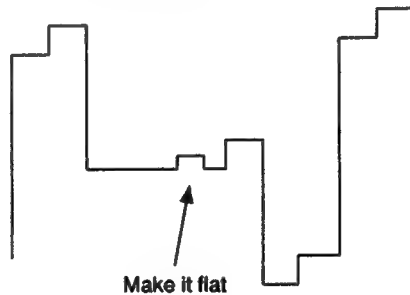


Fig. 5-21



#### 10-9. NTSC 443 B-Y PHASE NTSC 443 CHROMA NOR

Note : Be sure to set ACC in the ON position before this adjustment.

Note : Remove HV.DELAY before this adjustment.

- 1) Input an NTSC 443 color bar.
- 2) Connect the probe of an oscilloscope to TP402.
- 3) Set the unit in the service mode.
- 4) While tracking by means of **[B-Y PHASE NTSC 443]** and **[CHROMA NTSC 443 NOR]**, make adjustment so that the peaks of waveforms will be the same. (Fig.5-22)

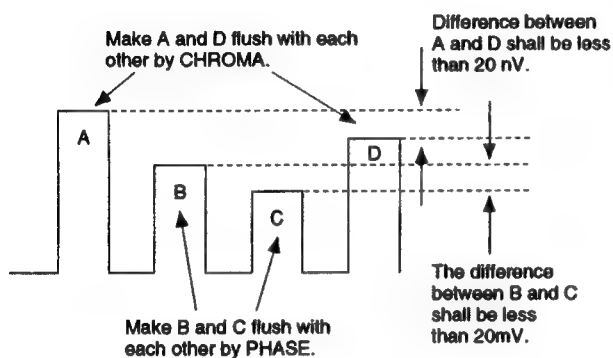


Fig. 5-22

#### 10-10. NTSC 443 CHROMA (ACC OFF)

Note : 10-10. is not applicable to the group of models 3.

- 1) Conduct ACC OFF via MENU.
- 2) Adjust **[CHROMA NTSC 443 ACC OFF]** in the same way as 10-9-4). (Fig.5-23)

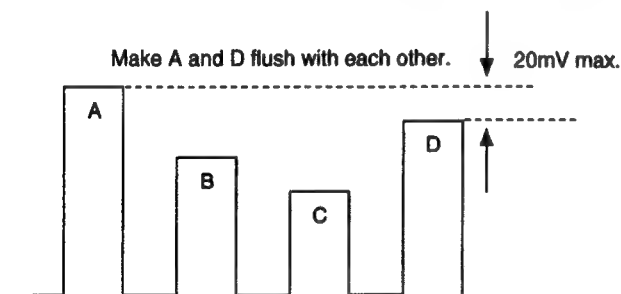


Fig. 5-23

#### 10-11. NT 443 R-Y LEVEL

Note : Be sure to set ACC in the ON position before this adjustment.

- 1) Input an NTSC 443 color bar.
- 2) Connect the probe of an oscilloscope to TP401.
- 3) Set the unit in the service mode.
- 4) Adjust **[R-Y LEVEL NTSC 443]** in the same way as 10-6-4). (Fig.5-24)

Make adjustment so that B = D. (20 mV max.) Check that the difference between B and C is 60 mV or less.

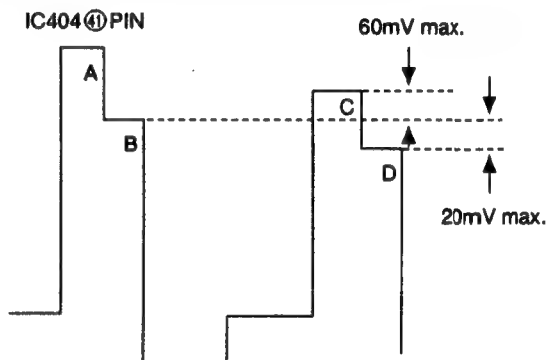
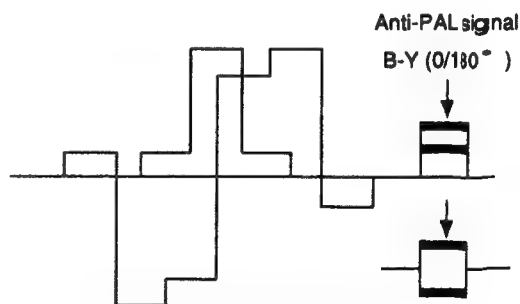


Fig. 5-24

#### 10-12. PAL PHASE (NORMAL)

- 1) Input a PAL SP color bar.
- 2) Connect the probe of an oscilloscope to TP306.
- 3) Set the unit in the service mode.
- 4) Adjust **[PHASE PAL NOR]** so that the waveform of the B-Y anti-PAL signal will be "0."



\*The signal waveform differs slightly every hour. Adjust it to "0."

Fig. 5-25 R-Y OUT



### 10-13. PAL PHASE (ACC OFF)

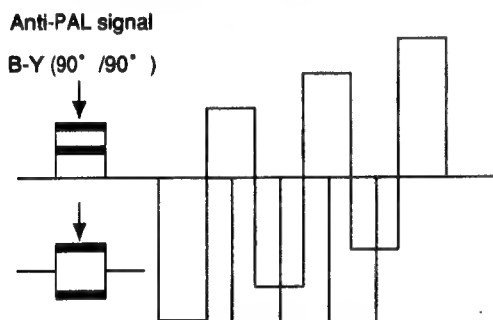
Note : 10-13. is not applicable to the group of models 3.

- 1) Conduct ACC OFF via MENU.
- 2) Adjust **PHASE PAL ACC OFF** in the same way as 10-12-4).

### 10-14. PAL B-Y PHASE

Note : Be sure to set ACC in the ON position before this adjustment.

- 1) Input a PAL SP color bar.
- 2) Connect the probe of an oscilloscope to TP305.
- 3) Set the unit in the service mode.
- 4) Adjust **B-Y PHASE PAL** so that the waveform of the R-Y anti-PAL signal will be "0." (Fig.5-26)



\*The signal waveform differs slightly every hour.  
Adjust it to "0."

Fig. 5-26 B-Y OUT

### 10-15. PAL CHROMA (NORMAL)

- 1) Input a PAL color bar.
- 2) Connect the probe of an oscilloscope to IC404 ⑩ PIN or TP402.
- 3) Set the unit in the service mode.
- 4) Adjust **CHROMA PAL NOR** so that the peaks of waveforms will be flush with each other. (Fig.5-27)

### 10-16. PAL CHROMA (ACC OFF)

Note : 10-16. is not applicable to the group of model 3.

- 1) Conduct ACC OFF via MENU.
- 2) Adjust **CHROMA PAL ACC OFF** in the same way as 10-15-4).(Fig.5-27)

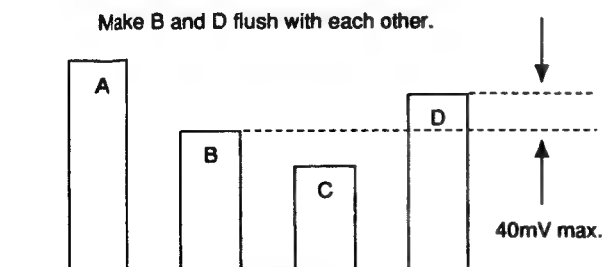


Fig. 5-27

### 10-17. PAL R-Y LEVEL

Note : Be sure to set ACC in the ON position before this adjustment.

- 1) Input a PAL color bar.
- 2) Connect the probe of an oscilloscope to IC404 ④ PIN or TP401.
- 3) Set the unit in the service mode.
- 4) Adjust **R-Y LEVEL PAL** so that the peaks of waveforms will be flush with each other as shown on the right. (Fig.5-28)

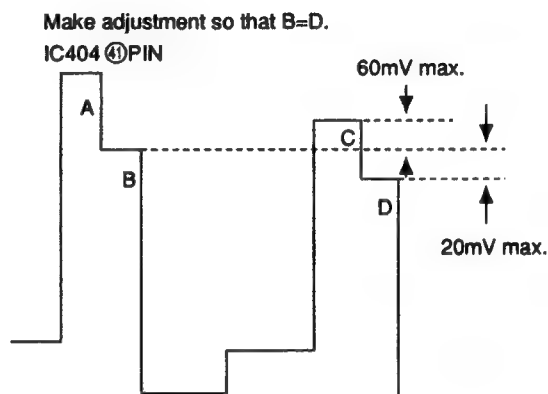


Fig. 5-28

## 11. SECAM adjustment

Note : Make adjustment after deflection adjustment.

Note : Subject to H-FREQ, H-BLK, VIDEO-PHASE, ANGLE, BOW, H-DELAY, etc.

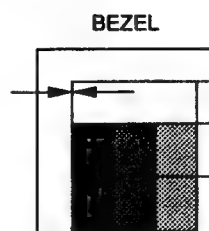
Note: 11. SECAM adjustment is not applicable to the group of models 3.

### 11-1. HP WIDTH (NORMAL) adjustment

- 1) Input a SECAM color bar.

Note : The board is roughly adjusted in 11-1., and IC317 ⑩ PIN pulse width may be used for control.

- 2) Set the unit in the UNDER SCAN mode.
- 3) Set the unit in the service mode.
- 4) Adjust **HP WIDTH NOR** so that the color section at the left edge of the upper portion of the screen is about to disappear. (Fig.5-29)



Make adjustment so that colors are about to disappear.

Fig. 5-29



### 11-2. Writing HP.WIDTH (NORMAL) data

Note : Not applicable to groups of models 1, 2, 4, and 5.

- 1) Set the unit in the service mode.
- 2) Input 102 to HP.WIDTH (NOR).

### 11-3. HP POSITION adjustment

Note : 11-3. is not applicable to the group of models 3.

- 1) Input a SECAM color bar.
- 2) Set the HV-DL mode.
- 3) Set the unit in the service mode.
- 4) Adjust **[HP POSITION]** as shown in Fig.5-30.

Note : The same as 11-3. The phase relationship between the beginning of IC317 ⑩ PIN pulse and the input VIDEO signal may be used for control.

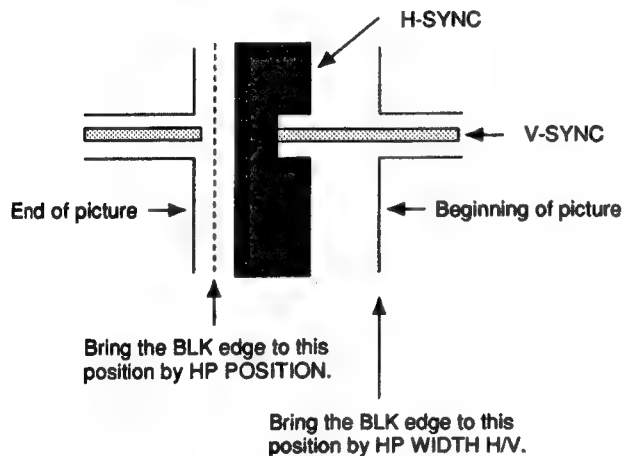


Fig. 5-30

### 11-4. HP WIDTH (H/V-DL) adjustment

Note : 11-4. is not applicable to the group of models 3.

- 1) Input a SECAM color bar.
- 2) Set the unit in the HV-DELAY mode.
- 3) Set the unit in the service mode.
- 4) Adjust **[HP WIDTH H/V-DELAY]** as shown in Fig.5-30. (Note: Check HP POSITION. If it is not in position, repeat 2) and 3).)

### 11-5. SECAM COL BALANCE

Note : 11-5. is not applicable to the group of models 3.

- 1) Input a SECAM color bar.
- 2) Connect the probe of an oscilloscope to TP306.
- 3) Set the unit in the service mode.
- 4) Adjust **[SECAM COLOR BALANCE R-Y]** so that the level in the achromatic color will be straight.

- 5) Connect the probe of an oscilloscope to TP305.

- 6) Adjust **[SECAM COLOR BALANCE B-Y]** so that the level in the achromatic color will be straight.

### 11-6. SECAM CHROMA

- 1) Input a SECAM color bar.
- 2) Connect the probe of an oscilloscope to IC404 ⑩ PIN or TP402.
- 3) Set the unit in the service mode.
- 4) Adjust **[CHROMA SECAM]** so that the peaks of waveforms will be flush with each other as shown in Fig.5-31.

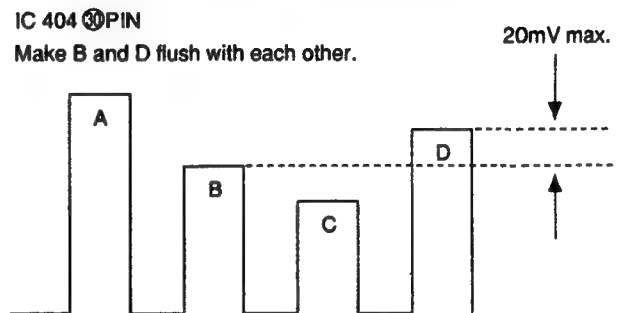


Fig. 5-31

### 11-7. SECAM R-Y LEVEL

- 1) Input a SECAM color bar.
- 2) Connect the probe of an oscilloscope to IC404 ④ PIN or TP401.
- 3) Set the unit in the service mode.
- 4) Adjust **[R-Y LEVEL SECAM]** so that the peaks of waveforms will be flush with each other as shown in Fig.5-32.

IC404 ④ PIN Make adjustment so that B=D.

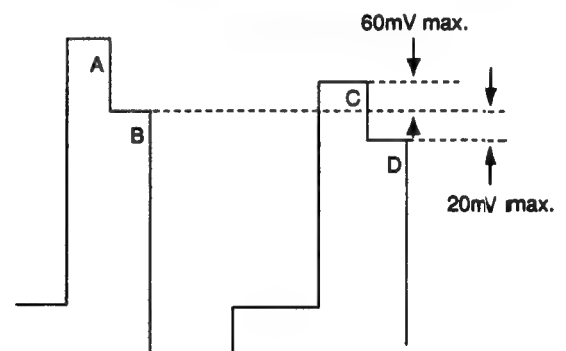


Fig. 5-32

## 12. Writing adjustment results

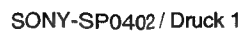
Write adjustment results in the memory.







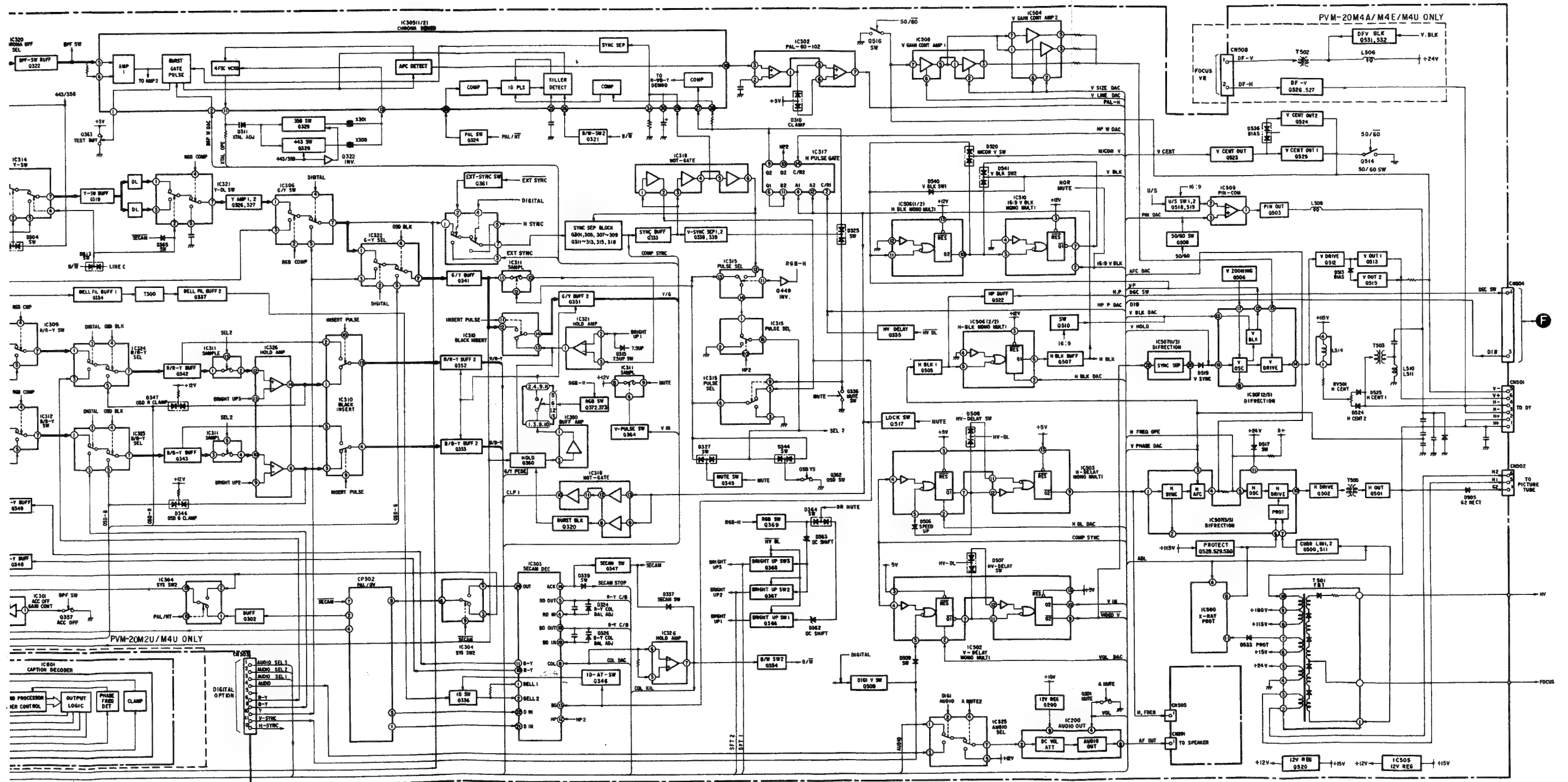
## 6-1. BLOCK DIAGRAMS (1)





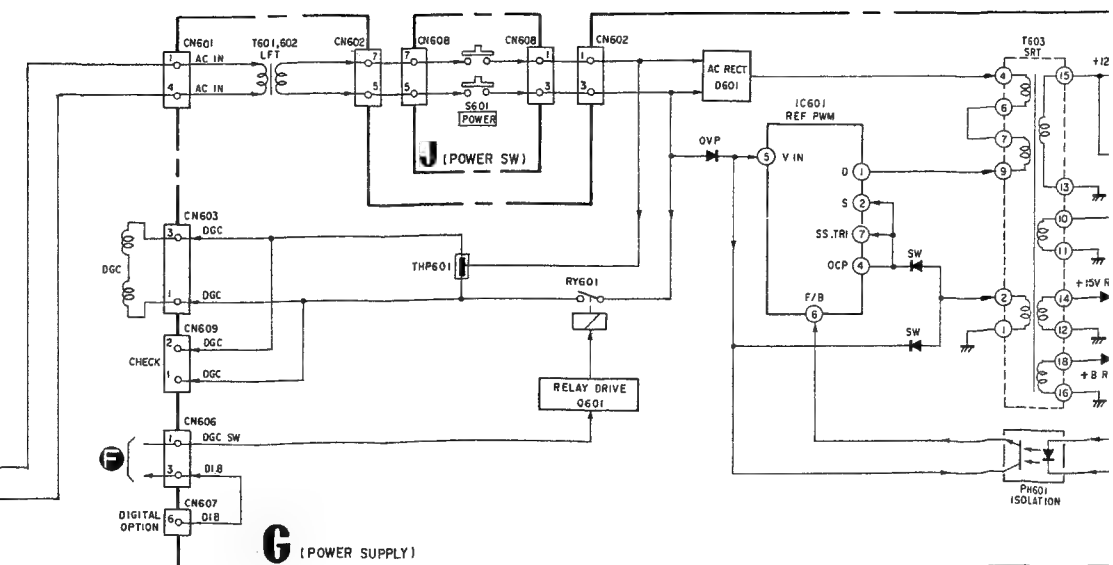
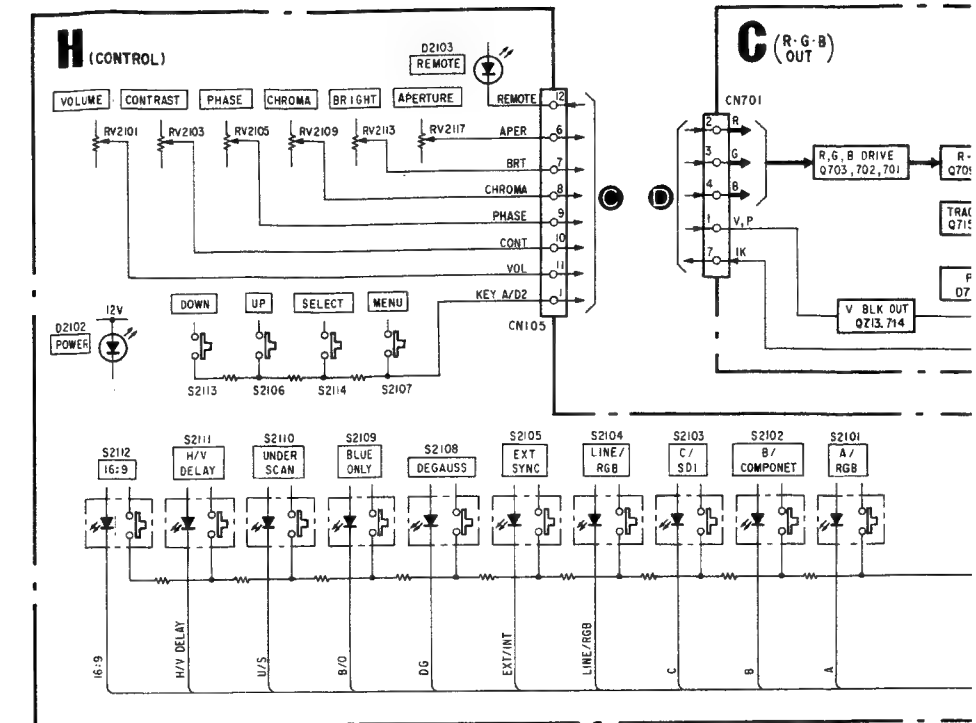
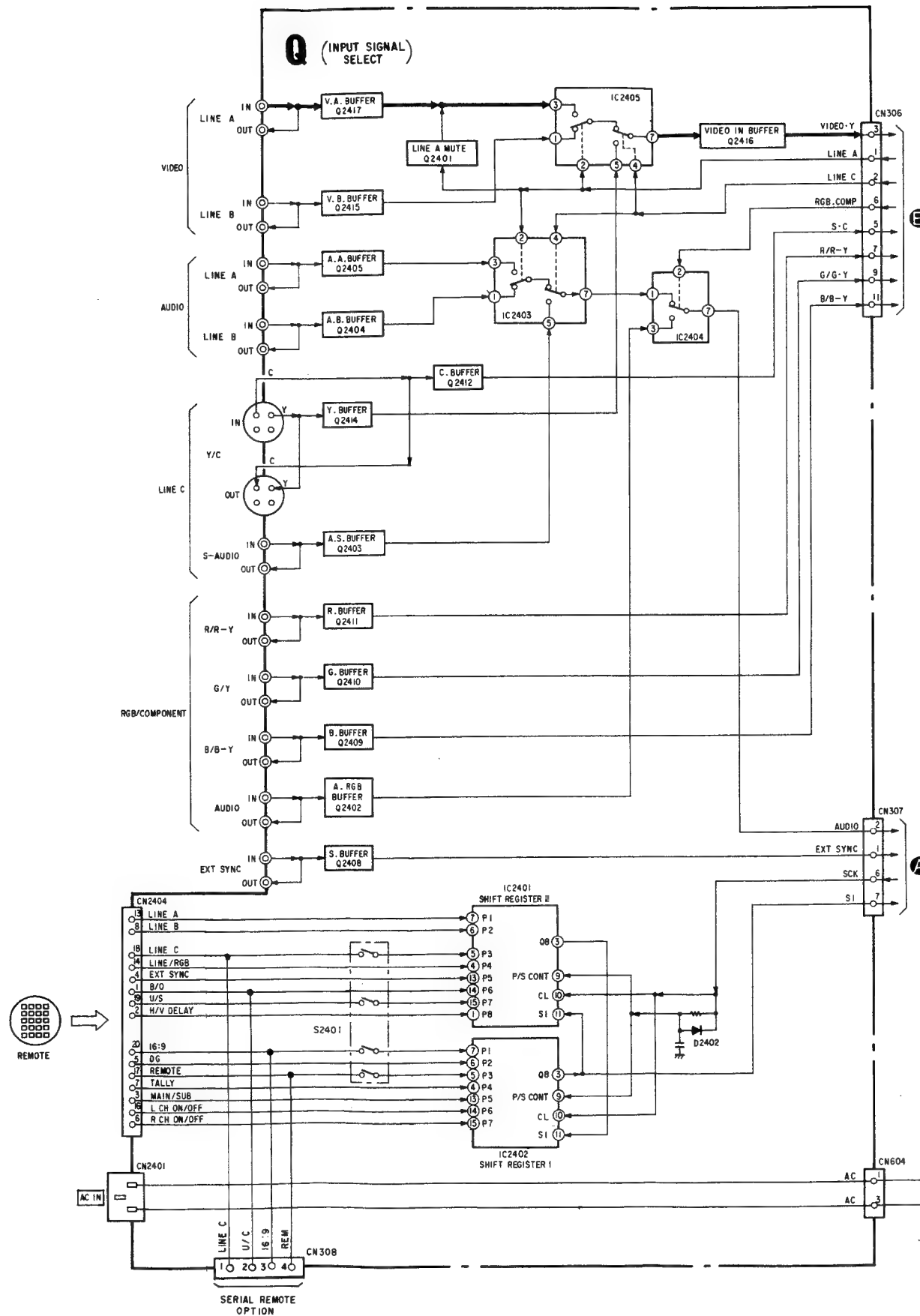




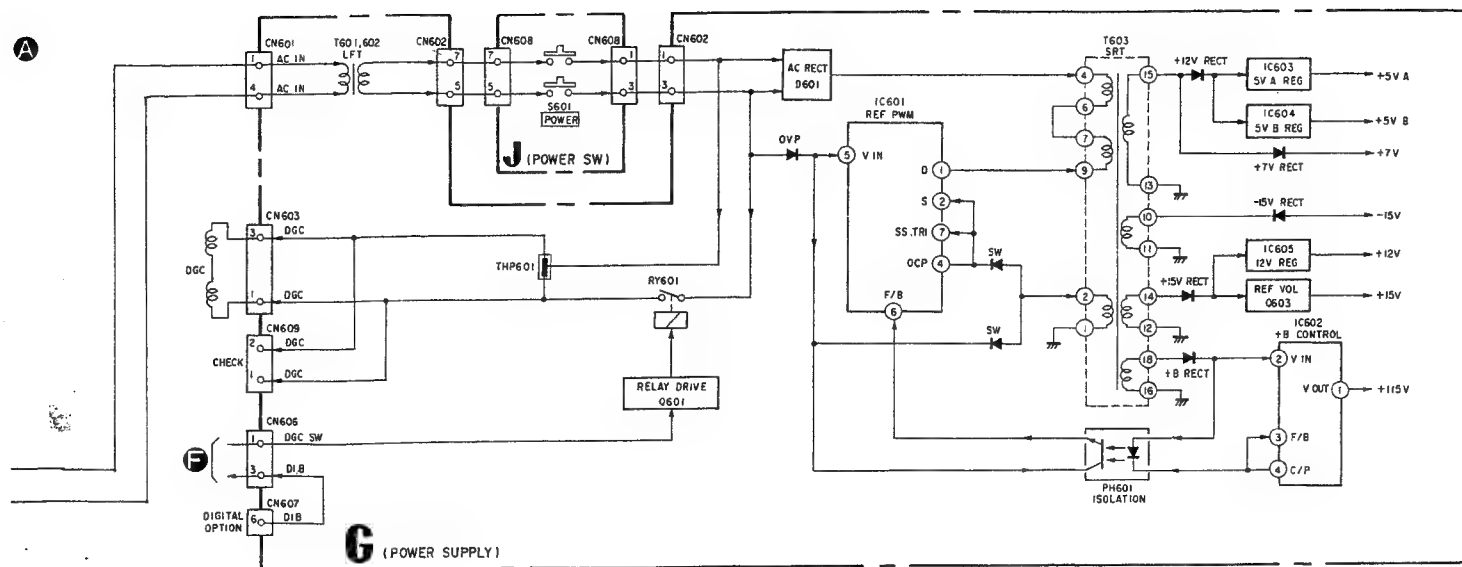
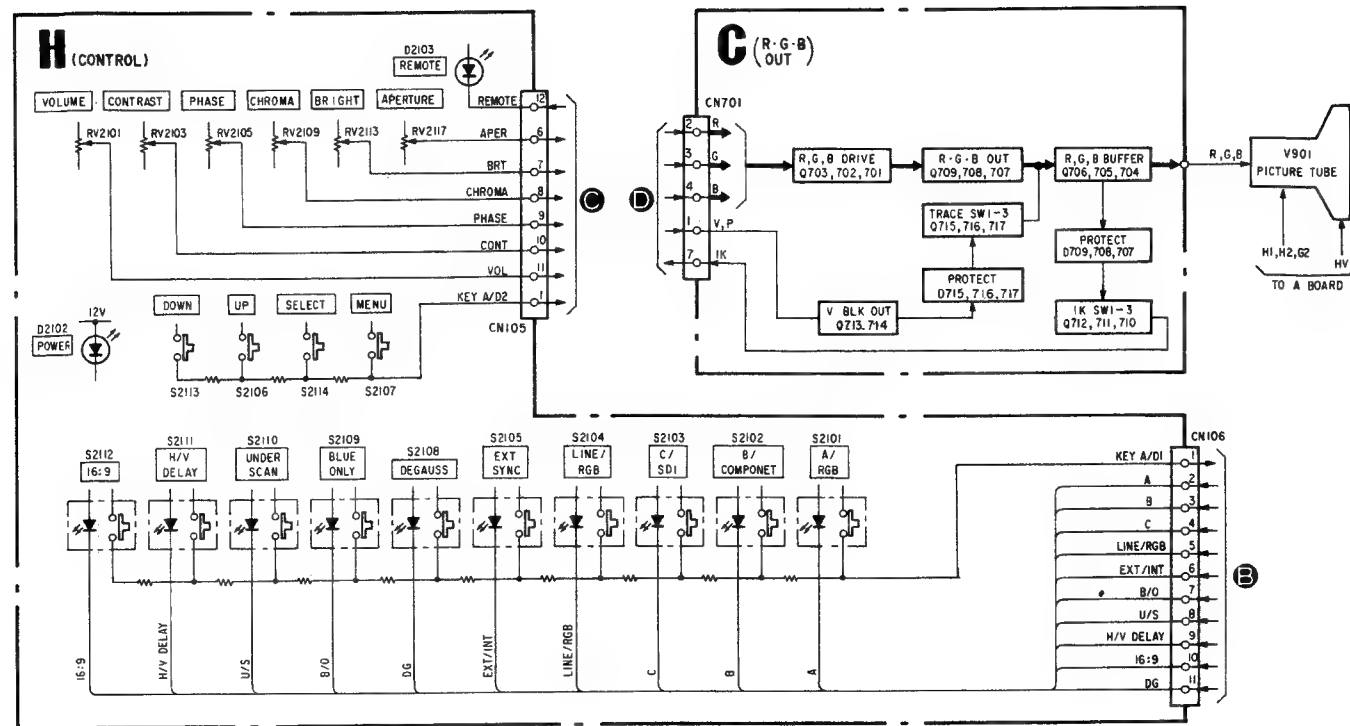




# BLOCK DIAGRAMS (2)





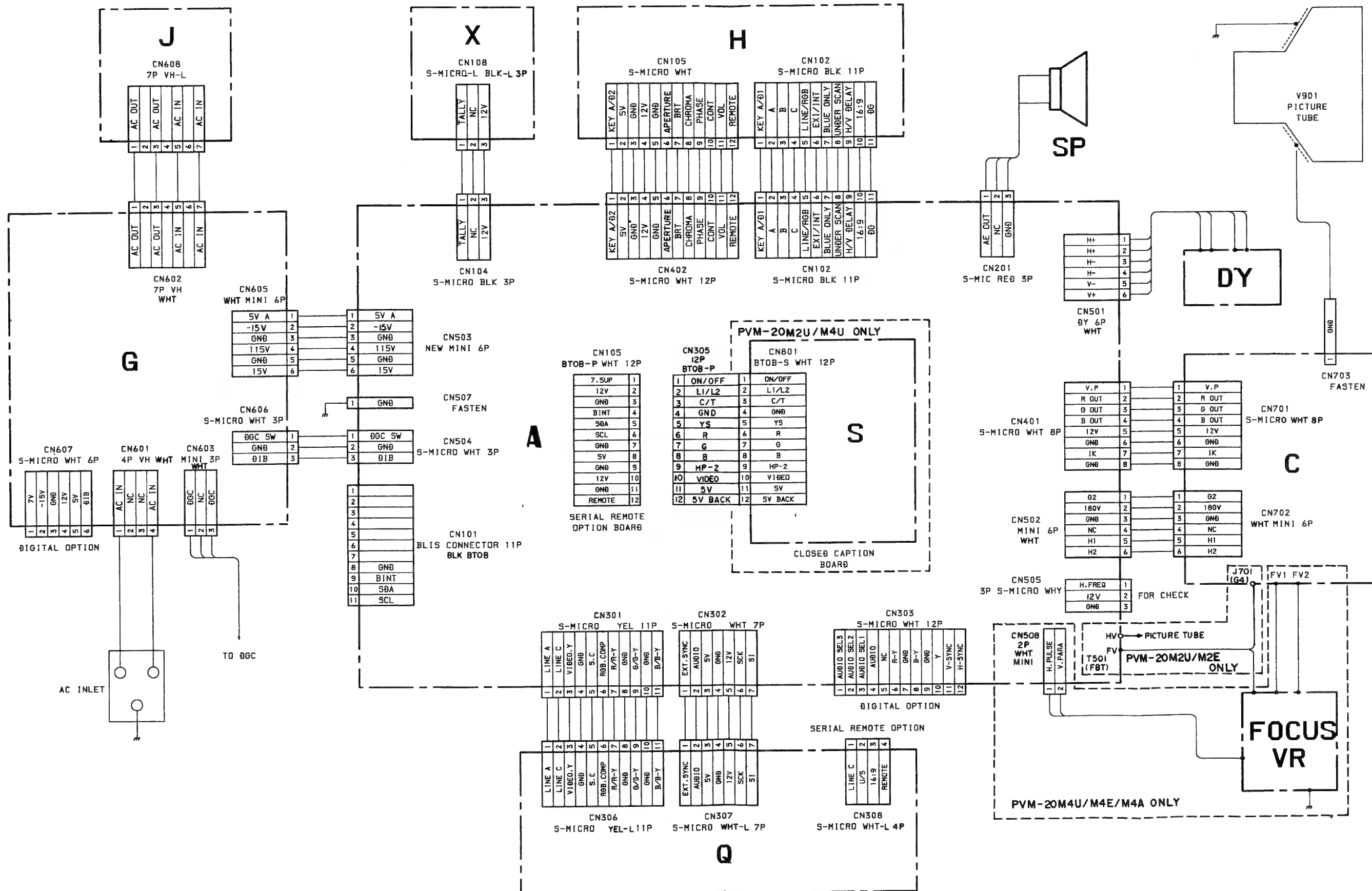




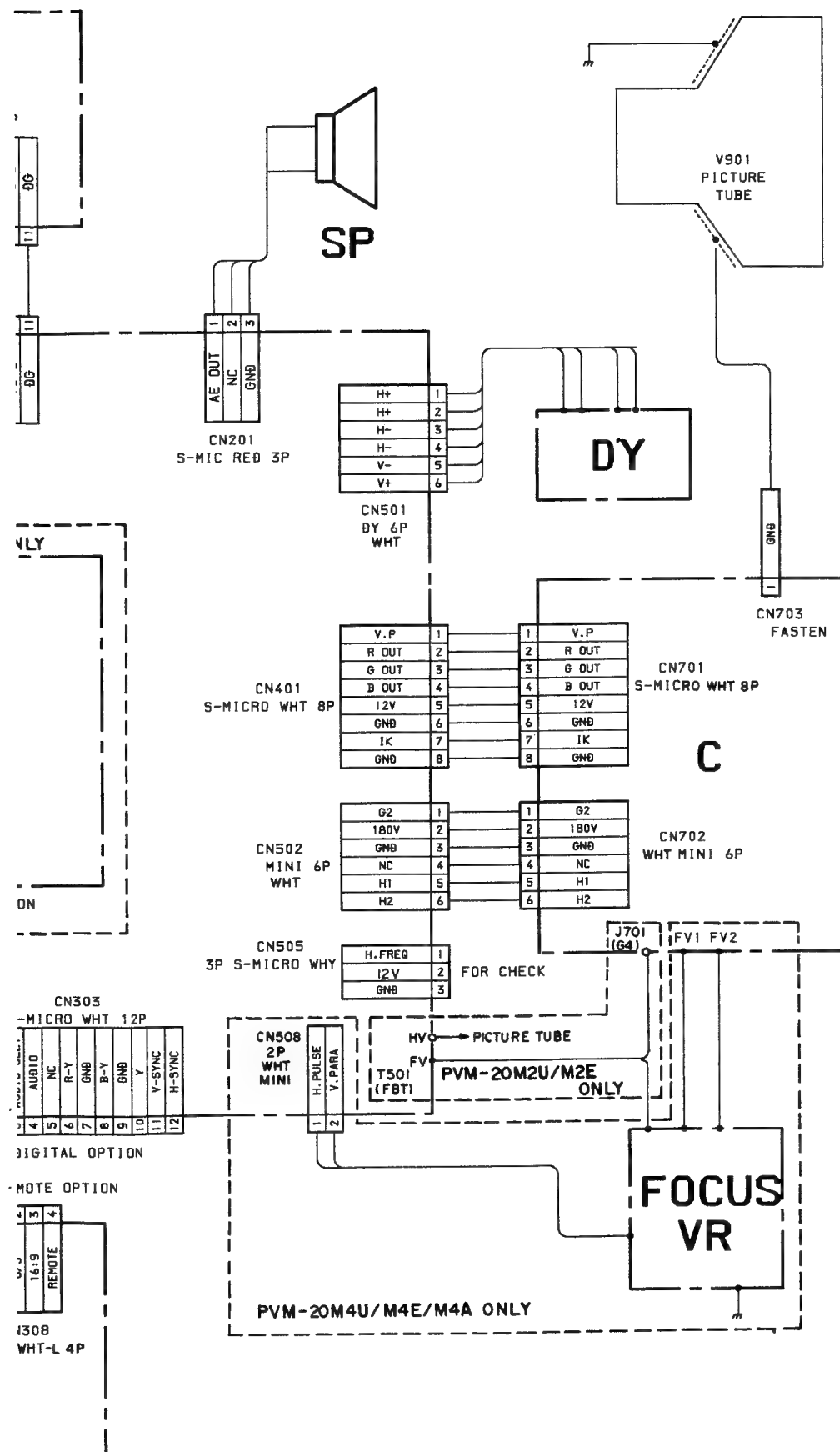




## 6-2. FRAME SCHEMATIC DIAGRAM



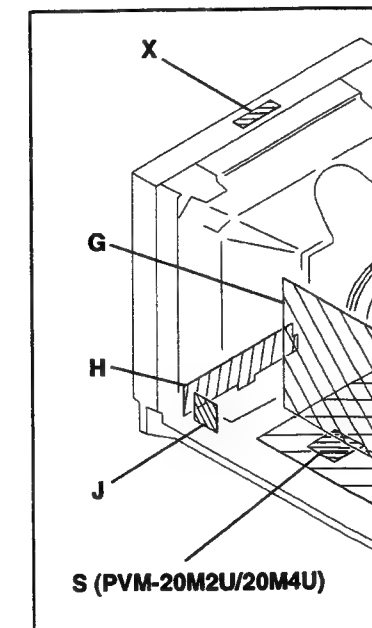




## MEMO

Blank lined area for notes.

## 6-3. CIRCUIT BOARDS LOC.



## 6-4. PRINTED WIRING BOARF

### Note:

- All capacitors are in  $\mu F$  unless other 50 WV or less are not indicated except
- Indication of resistance, which does not electrical power, is as follows.

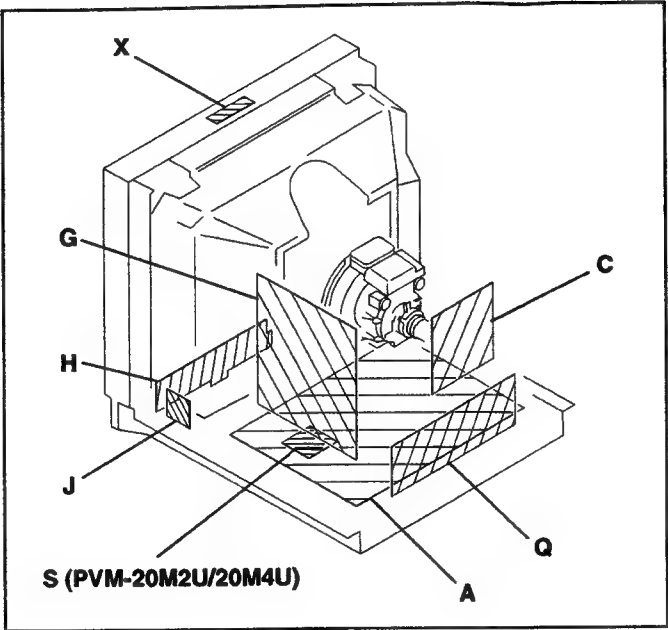
Pitch: 5 mm  
Rating electrical power  $\frac{1}{4}$  W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, and adjust
- All variable and adjustable resistors: B, unless otherwise noted.
- The components identified by in diagram have been carefully factory-s order to satisfy regulations regarding X- Should replacement be required, replk originally used.
- When replacing components identify necessary adjustments indicated. If r specified value, change the compone repeat the adjustment until the speci (Refer to R1536 adjust on Page 25 and
- When replacing the part in below table related adjustment.

Part replaced
C512, C513, C523, C549, C592, D533, IC500, IC507, Q500, Q51, R508, R515, R516, R517, R518, R551, R1537, R1560..... (A E



6-3. CIRCUIT BOARDS LOCATION



6-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm  
Rating electrical power  $\frac{1}{4}$  W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R1536 adjust on Page 25 and 26.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ()	Adjustment ()
C512, C513, C523, C549, C592, D501, D533, IC500, IC507, Q500, Q511, R506, R508, R515, R516, R517, R518, R519, R551, R1537, R1560..... (A BOARD)	R1536 (HOLD-DOWN)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- : B + bus.
- : B - bus.
- : signal path.
- No mark : with PAL colour-bar signal sreceived or common voltage.
- For the respective voltage ratings in SECAM, NTSC 3.58, NTSC 4.43 S-VIDEO, and ANALOG RGB modes, see the table

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.



**A** [MICON, RGB-MATRIX, DAC,  
ON SCREEN DISPLAY, ON/OFF MUTE,  
VOL OFF SW, BLACK-SAMPLING, RGB SW]

[CHROMA DEMOD, SECAM CHROMA SELECT, SYSTEM SW,  
SYNC SELECT, B/B Y SW, R/R Y SW, G/Y SW,  
AUDIO SELECT, SECAM DECODER, HOLD AMP]

[H/V OUT, DEFLECTION SYSTEM,  
AUDIO OUT]

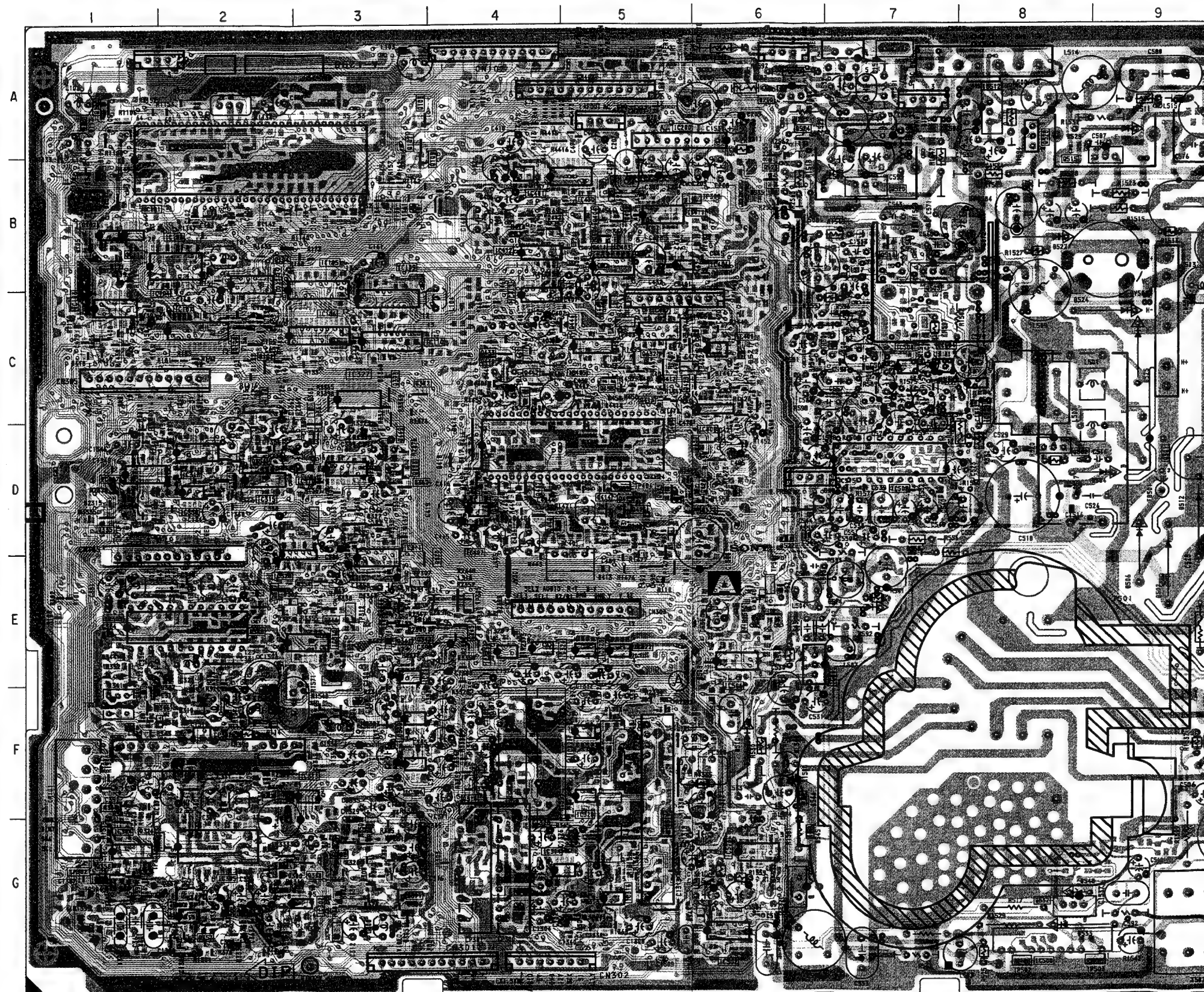
**A BOARD  
(COMPONENT SIDE)**

IC		Q108	C-2	Q527	E-10
IC101		Q109	A-3	Q528	A-8
IC102		Q110	A-1	Q532	G-8
IC103		Q112	D-6	<b>DIODE</b>	
IC104		Q200	A-6		
IC105		Q300	G-3	D100	D-5
IC106		Q308	G-3	D104	B-1
IC107		Q311	G-3	D105	B-1
IC109		Q314	F-4	D106	B-4
IC110		Q316	F-5	D108	E-5
IC111		Q320	E-3	D109	A-1
IC112		Q324	G-1	D110	E-5
IC200		Q335	D-1	D112	A-1
IC301		Q340	F-1	D114	F-2
IC302		Q341	E-3	D300	G-2
IC303		Q342	E-3	D301	D-2
IC304		Q343	E-4	D305	G-3
IC305		Q346	F-1	D308	F-2
IC306		Q347	E-2	D313	G-5
IC309		Q348	E-2	D314	C-1
IC310		Q353	D-3	D327	D-3
IC311		Q354	E-3	D332	E-3
IC312		Q355	F-5	D335	F-1
IC313		Q356	D-2	D336	F-1
IC314		Q357	G-2	D338	E-3
IC315		Q358	G-1	D339	E-2
IC316		Q359	G-1	D360	C-3
IC317		Q360	D-2	D361	C-3
IC318		Q362	D-3	D362	E-2
IC320		Q365	E-3	D365	G-4
IC321		Q366	E-3	D381	D-2
IC322		Q372	C-3	D406	C-1
IC323		Q373	C-3	D413	E-5
IC324		Q374	C-3	D414	D-4
IC325		Q404	B-5	D415	D-5
IC326		Q406	B-5	D416	D-4
IC327		Q408	B-5	D417	D-4
IC350		Q410	D-4	D418	D-4
IC401		Q411	B-5	D423	C-6
IC402		Q412	C-5	D424	B-5
IC403		Q413	C-5	D502	E-9
IC404		Q414	D-5	D504	D-9
IC405		Q415	D-5	D505	E-10
IC406		Q416	D-5	D506	D-9
IC407		Q425	D-5	D510	F-6
IC408		Q426	D-6	D512	D-9
IC409		Q429	C-5	D514	E-7
IC410		Q430	D-6	D515	F-10
IC411		Q432	C-5	D520	E-6
IC412		Q433	C-4	D521	C-6
IC413		Q435	D-4	D522	D-6
IC500		Q436	D-4	D524	C-8
IC502		Q437	D-4	D525	C-9
IC503		Q438	C-5	D527	B-8
IC504		Q440	C-4	D528	A-10
IC505		Q441	C-4	D529	A-8
IC506		Q442	C-4	D530	A-10
IC507		Q445	C-5	D533	G-8
IC508		Q446	C-5	D535	B-6
IC509		Q447	B-4	D537	A-7
IC510		Q449	D-3	D538	D-6
IC511		Q501	D-9	D540	E-6
IC512		Q502	D-8	D541	F-3
		Q503	B-7	D543	G-6
		Q512	A-10	D544	F-6
		Q513	A-9	D545	G-6
		Q515	A-8	D546	E-10
		Q518	B-7	D548	G-8
		Q520	B-7	<b>VARIABLE RESISTOR</b>	
		Q523	B-6		
		Q524	A-6	RV501 B-9	
		Q525	A-6		
		Q526	G-6		

**TRANSISTOR**

Q102	C-2
Q103	C-2
Q104	B-2
Q105	A-3
Q107	A-3

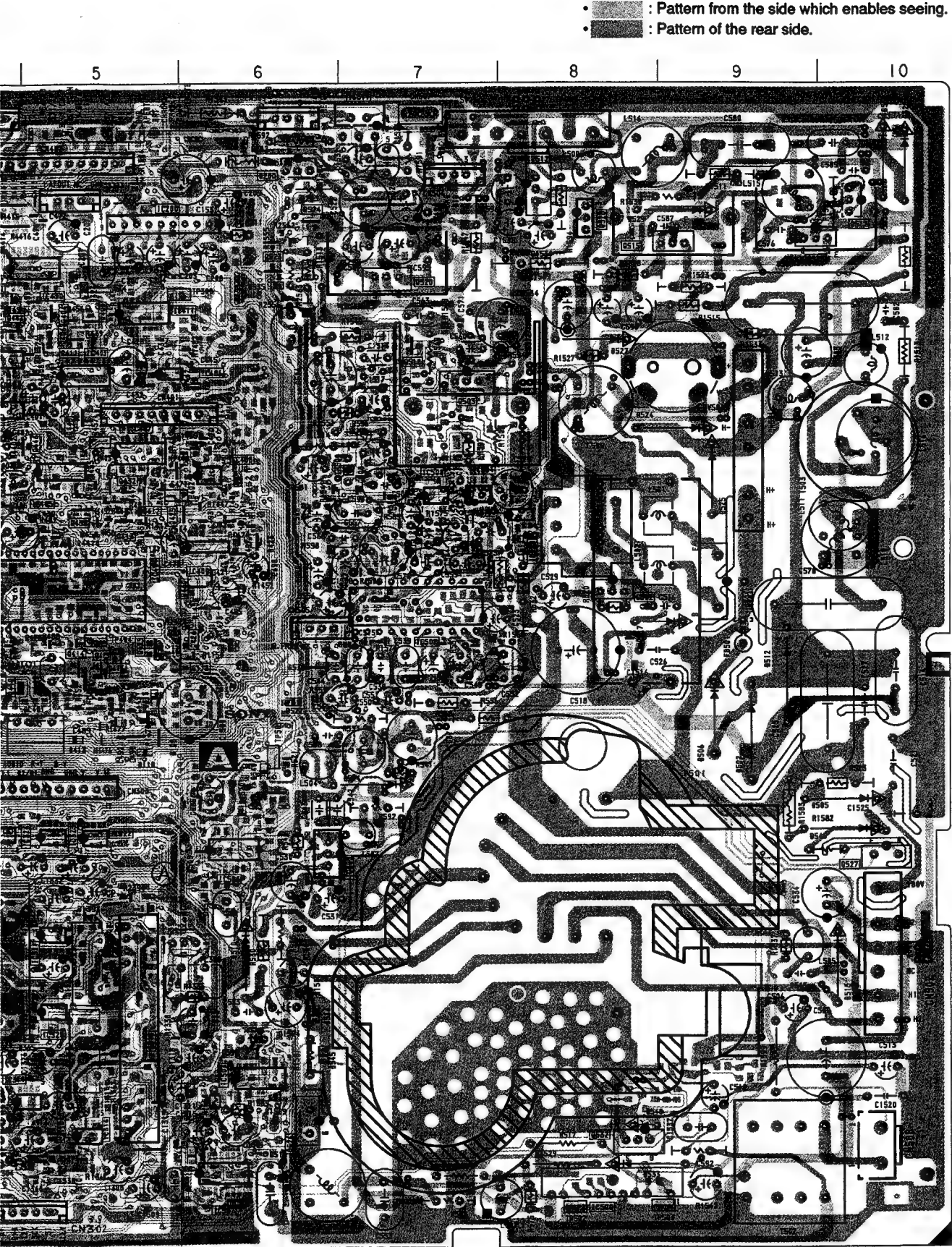
**-A BOARD- <Component Side>**



• : Pattern from the side  
• : Pattern of the rear side



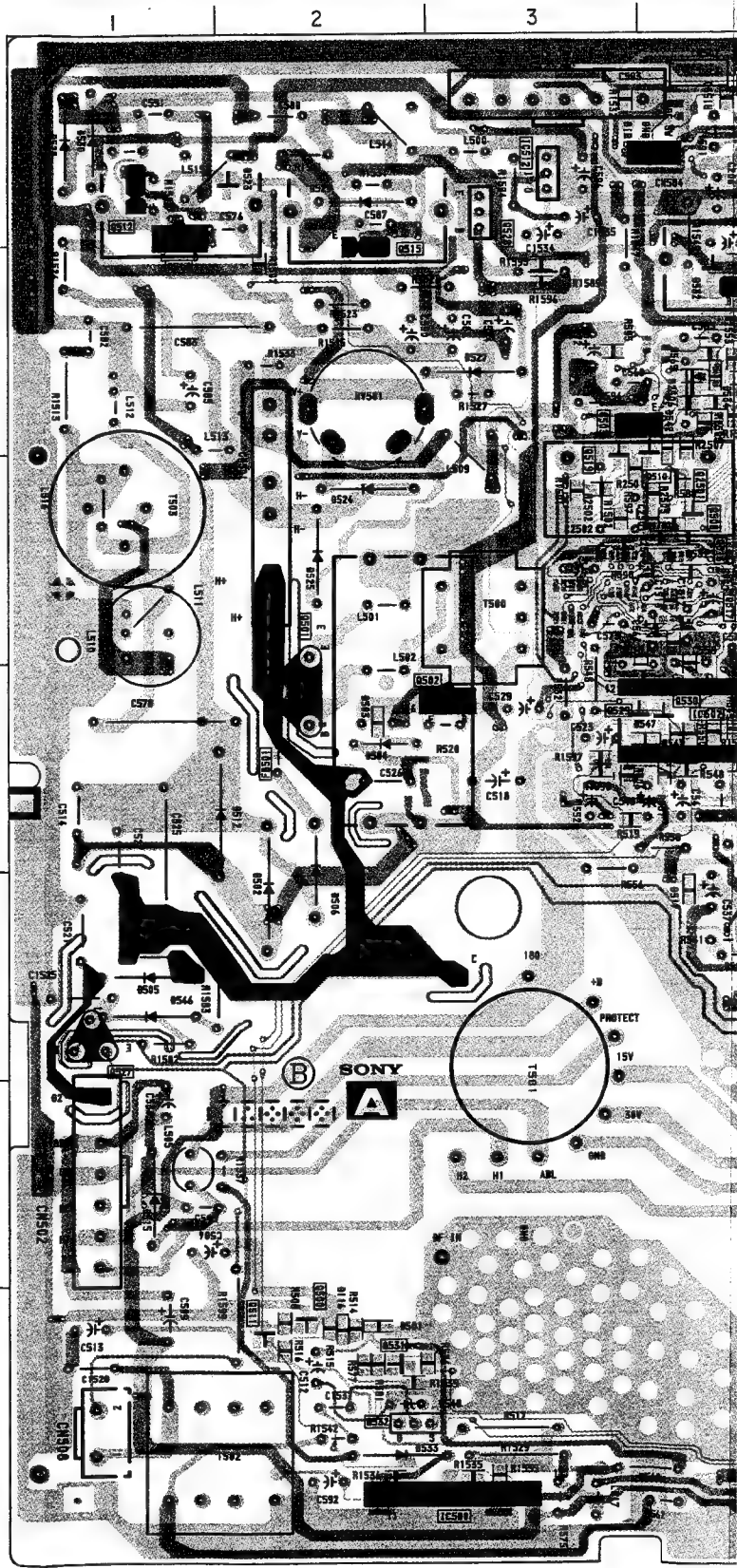
SYSTEM,



A BOARD  
(CONDUCTOR SIDE)

IC		Q405 C-6		D322 D-9	
IC101	A-9	Q407	C-7	D323	C-9
IC108	B-8	Q409	D-7	D324	E-9
IC200	A-5	Q417	C-5	D325	D-8
IC303	E-9	Q418	B-5	D326	E-8
IC404	D-6	Q419	C-6	D333	C-9
IC500	G-3	Q420	C-6	D337	E-8
IC505	E-4	Q421	B-5	D344	D-8
IC507	D-4	Q422	B-5	D345	E-7
IC511	A-4	Q423	C-5	D346	E-7
IC512	A-3	Q424	C-5	D347	E-7
TRANSISTOR		Q428	D-6	D363	E-8
Q101	A-9	Q431	B-5	D364	E-8
Q111	C-10	Q434	C-5	D401	B-7
Q113	A-7	Q439	C-6	D402	B-7
Q114	A-8	Q444	B-5	D404	D-6
Q200	A-5	Q448	F-9	D405	B-5
Q201	A-5	Q500	G-2	D407	D-7
Q301	G-8	Q501	D-2	D410	C-5
Q302	G-10	Q502	D-3	D411	B-6
Q303	G-6	Q503	B-3	D421	C-5
Q305	G-8	Q505	E-5	D422	C-5
Q306	G-7	Q506	B-4	D425	C-5
Q307	G-8	Q507	E-5	D427	B-6
Q309	G-8	Q508	C-4	D500	G-5
Q310	G-7	Q509	G-5	D501	G-2
Q312	G-8	Q510	C-4	D502	E-2
Q313	G-8	Q511	G-2	D503	D-2
Q315	G-8	Q512	A-1	D504	D-2
Q318	G-7	Q513	A-1	D505	E-1
Q319	F-7	Q514	B-4	D506	E-2
Q321	G-8	Q515	B-2	D507	G-5
Q322	G-6	Q516	C-4	D508	F-5
Q323	G-10	Q517	C-4	D509	G-5
Q325	T-8	Q519	C-3	D510	F-5
Q326	F-6	Q520	B-4	D511	E-5
Q327	F-6	Q522	E-5	D512	D-2
Q328	G-9	Q525	A-4	D513	E-5
Q329	G-9	Q526	G-4	D514	E-4
Q330	F-9	Q527	E-1	D515	F-1
Q331	F-9	Q528	A-3	D516	F-5
Q332	G-10	Q529	D-3	D517	E-4
Q333	D-9	Q530	D-4	D518	E-5
Q334	F-9	Q531	G-2	D519	C-4
Q336	E-10	Q532	G-2	D523	A-2
Q338	C-8	Q533	C-4	D524	C-2
Q339	D-8	Q534	C-4	D525	C-2
Q345	D-8	Q535	C-4	D526	B-4
Q349	E-9	Q536	C-4	D527	B-3
Q350	D-8	Q537	C-4	D528	A-1
Q351	D-8	Q538	C-4	D529	A-2
Q352	D-8	Q539	C-4	D530	A-1
Q355	F-5	Q540	C-4	D531	B-4
Q361	F-8	Q541	C-4	D532	B-4
Q363	G-9	Q542	C-4	D533	G-2
Q364	D-8	Q543	C-4	D534	B-4
Q367	E-8	Q544	C-4	D536	A-5
Q368	E-8	Q545	C-4	D542	B-4
Q369	E-8	Q546	C-4	D546	E-1
Q375	D-8	Q547	C-4	D547	D-4
Q401	B-6	Q548	C-4	D548	G-2
Q402	B-6				
Q403	B-6				
DIODE		D101 B-10		VARIABLE RESISTOR	
		D102 B-9		RV501 B-2	
		D103 B-9			
		D107 B-9			
		D111 B-9			
		D115 B-9			
		D116 G-2			
		D200 A-4			
		D301 G-8			
		D303 F-7			
		D304 G-7			
		D307 G-8			
		D309 G-8			
		D310 G-8			
		D311 G-9			
		D315 E-8			
		D317 D-9			
		D320 D-9			

-A BOARD- <Conductor Side>

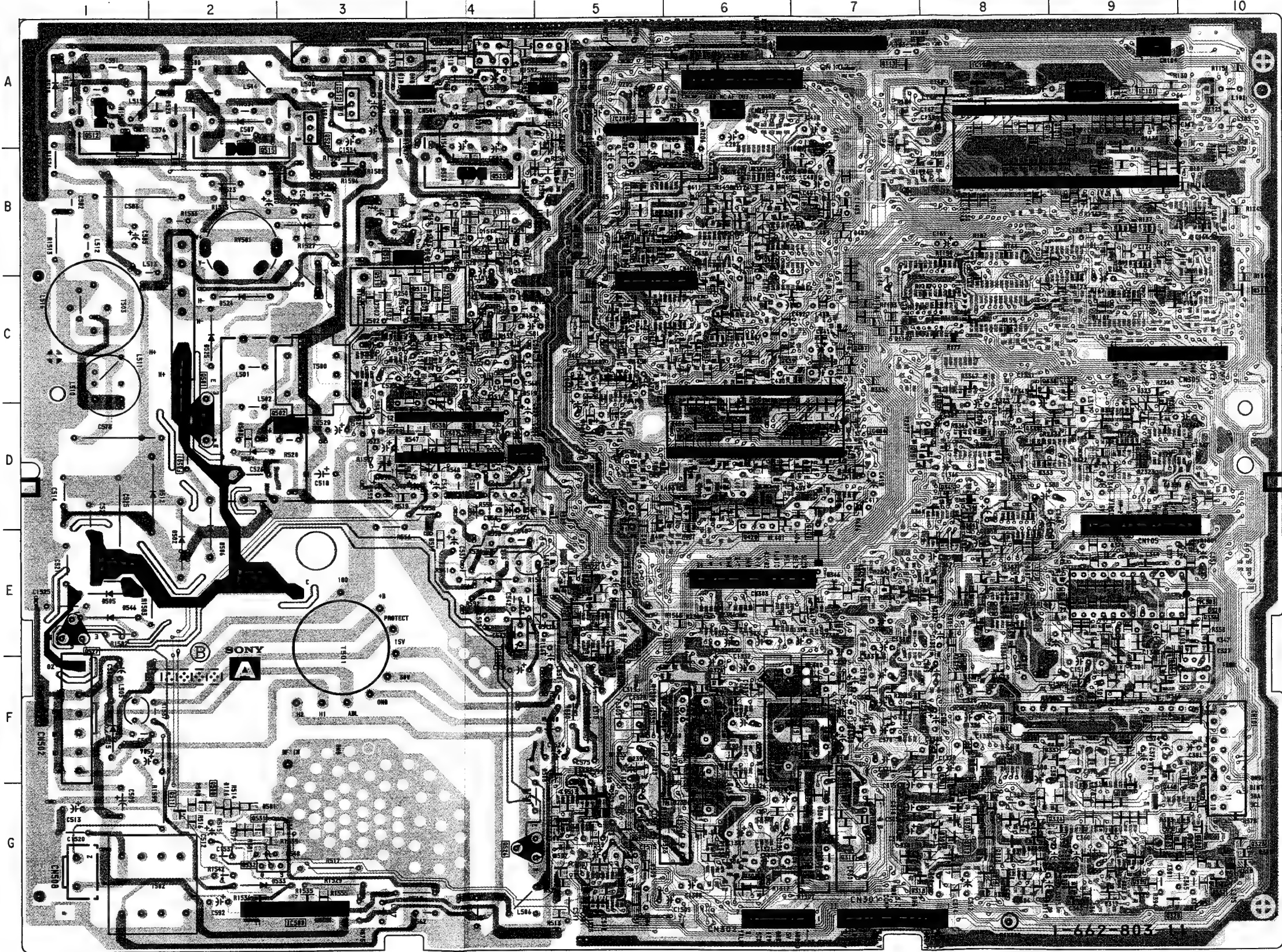




A BOARD  
(CONDUCTOR SIDE)

IC		Q405	C-6	D322	D-9
IC101	A-9	Q407	C-7	D323	C-9
IC108	B-8	Q409	D-7	D324	E-9
IC200	A-5	Q417	C-5	D325	D-8
IC303	E-9	Q418	B-5	D326	E-9
IC404	D-6	Q419	C-6	D333	C-9
IC500	G-3	Q420	C-6	D337	E-8
IC505	E-4	Q421	B-5	D344	D-8
IC507	D-4	Q422	B-5	D345	E-7
IC511	A-4	Q423	C-5	D346	E-7
IC512	A-3	Q424	C-6	D347	E-7
TRANSISTOR		Q428	D-6	D363	E-8
Q101	A-9	Q431	B-5	D364	E-8
Q111	C-10	Q434	C-5	D401	B-7
Q113	A-7	Q439	C-6	D402	B-7
Q114	A-8	Q444	B-5	D404	D-6
Q200	A-5	Q448	F-9	D405	B-5
Q201	A-5	Q500	G-2	D407	D-7
Q301	G-8	Q501	D-2	D410	C-5
Q302	G-10	Q502	D-3	D411	B-6
Q303	G-6	Q503	B-3	D421	C-5
Q305	G-8	Q505	E-5	D422	C-5
Q306	G-7	Q506	B-4	D425	C-5
Q307	G-8	Q507	E-5	D427	B-6
Q309	G-8	Q508	C-4	D500	G-5
Q310	G-7	Q509	G-5	D501	G-2
Q312	G-8	Q510	C-4	D502	E-2
Q313	G-8	Q511	G-2	D503	D-2
Q315	G-8	Q512	A-1	D504	D-2
Q318	G-7	Q513	A-1	D505	E-1
Q319	F-7	Q514	B-4	D506	E-2
Q321	G-8	Q515	B-2	D507	G-5
Q322	G-6	Q516	C-4	D508	F-5
Q323	G-10	Q517	C-4	D509	G-5
Q325	F-8	Q519	C-3	D510	F-5
Q326	F-6	Q520	B-4	D511	E-5
Q327	F-6	Q522	E-5	D512	D-2
Q328	G-9	Q525	A-4	D513	E-5
Q329	G-9	Q526	G-4	D514	E-4
Q330	F-9	Q527	F-1	D515	F-1
Q331	F-9	Q528	A-3	D516	F-5
Q332	G-10	Q529	D-3	D517	E-4
Q333	D-9	Q530	D-4	D518	E-5
Q334	F-9	Q531	G-2	D519	C-4
Q336	E-10	Q532	G-2	D523	A-2
Q338	C-8	Q2501	C-4	D524	C-2
Q339	D-8	DIODE		D525	C-2
Q345	D-8	D101	B-10	D526	B-4
Q349	E-9	D102	B-9	D527	B-3
Q350	D-8	D103	B-9	D528	A-1
Q351	D-8	D107	B-9	D529	A-2
Q352	D-8	D111	B-9	D530	A-1
Q355	F-5	D115	B-9	D531	B-4
Q361	F-8	D116	G-2	D532	B-4
Q363	G-9	D200	A-4	D533	G-2
Q364	D-8	D301	G-8	D534	B-4
Q367	E-8	D303	F-7	D536	A-5
Q368	E-8	D304	G-7	D542	B-4
Q369	E-8	D307	G-8	D546	E-1
Q375	D-8	D309	G-8	D547	D-4
Q401	B-6	D310	G-8	D548	G-2
Q402	B-6	D311	G-9	VARIABLE RESISTOR	
Q403	B-6	D315	E-8	RV501	B-2
		D317	D-9		
		D320	D-9		

-A BOARD- <Conductor Side>



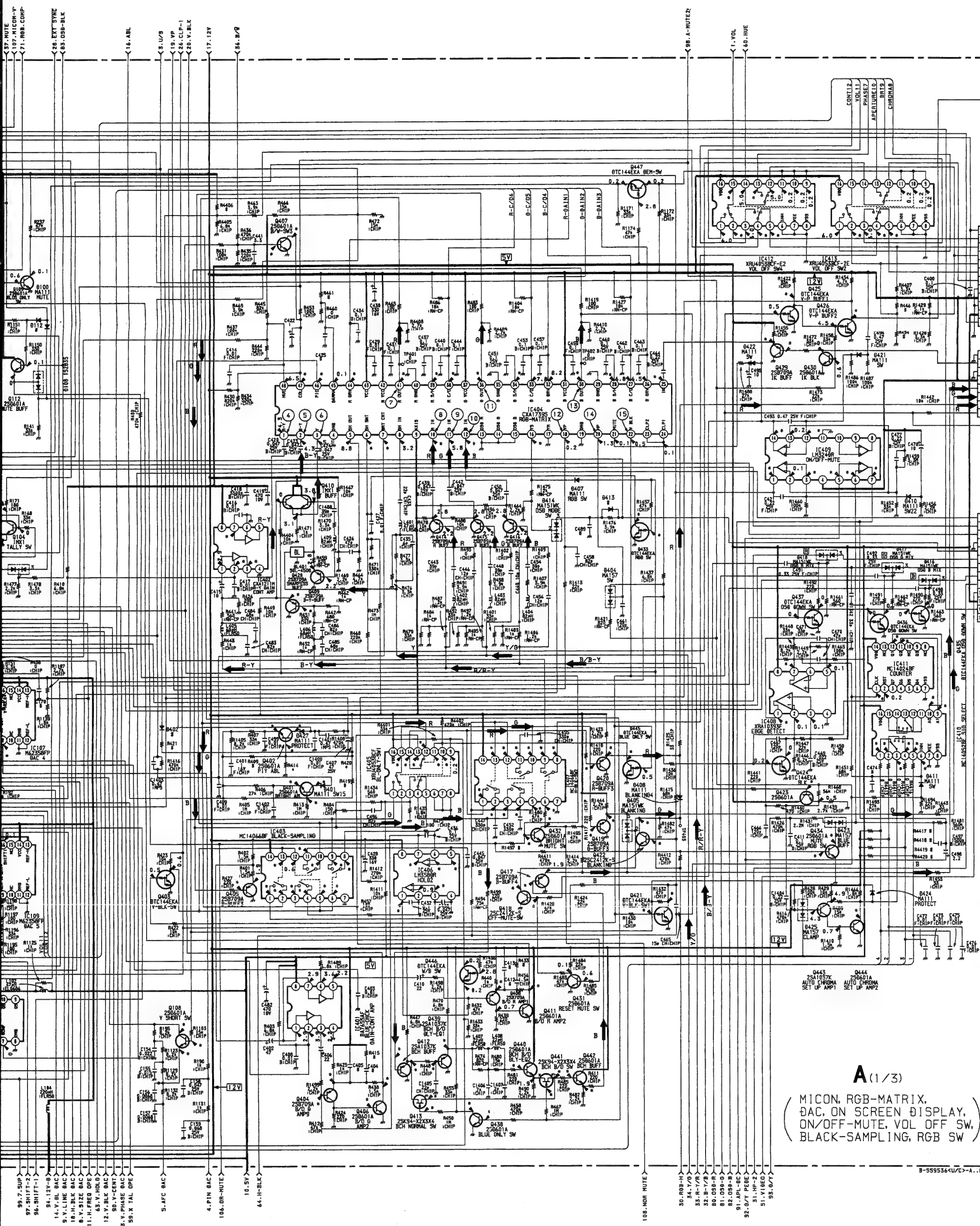
**NOTE:**  
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.









**A**<sub>(1/3)</sub>

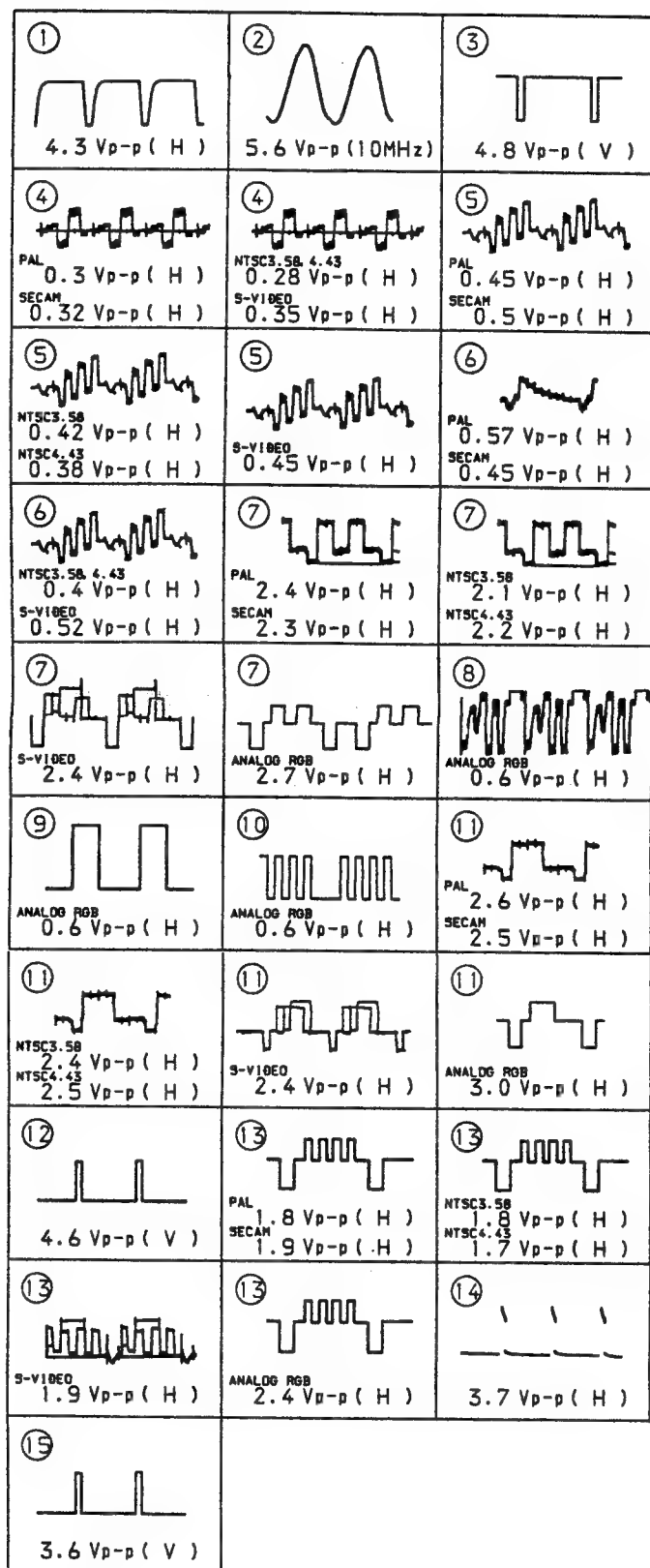
( MICON, RGB-MATRIX,  
DAC, ON SCREEN DISPLAY,  
ON/OFF-MUTE, VOL OFF SW,  
BLACK-SAMPLING, RGB SW )



	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
IC101 ②	2.3	2.4	2.2	2.2	2.0
③	4.5	4.6	4.5	4.4	4.4
④	4.1	3.4	0	0.1	0
⑤	3.4	3.5	3.5	3.5	3.1
⑥	0	0	0	0	4.8
⑦	0	0	0	0	0
⑧	4.9	5.0	0	0	0
⑨	5.0	5.0	0	5.0	0
⑩	5.0	5.0	0	0	0
⑪	0	5.0	0	0	0
⑫	0.1	0	0.1	0.1	4.9
⑬	5.0	5.0	5.0	5.0	0
⑭	5.0	5.0	5.0	5.0	4.9
⑮	5.0	5.0	5.0	5.0	5.0
⑯	4.2	4.1	4.6	5.0	3.9
⑰	4.0	4.0	4.6	5.0	3.6
⑱	0.3	4.4	0.1	0.7	0.1
⑲	4.2	0.1	4.3	4.2	4.2
⑳	4.0	3.4	3.6	3.7	3.9
㉑	0.5	0.9	1.0	0.8	3.1
㉒	3.0	2.5	2.6	2.3	3.3
㉓	3.6	3.0	2.9	3.2	3.9
㉔	4.0	4.0	4.0	4.0	2.9
IC103 ⑥	0.2	0	0.2	0.2	0
IC104 ⑥	2.3	2.3	2.2	2.2	2.0
⑦	3.5	3.5	3.5	3.5	3.1
IC105 ③	2.3	2.3	2.2	2.2	0
④	0	0.1	0.1	0	11.8
⑤	2.6	2.7	2.7	2.6	2.8
⑥	5.4	5.4	5.4	5.4	6.6
IC106 ③	2.3	2.3	2.2	2.2	2.1
④	5.4	5.4	5.4	5.4	4.1
⑤	2.4	2.4	2.4	2.4	0.6
⑥	7.6	7.6	7.6	7.7	5.5
⑦	5.1	5.1	5.1	5.1	4.0
⑧	0.1	10.5	10.5	10.5	10.9
⑨	3.1	3.1	2.6	3.1	2.7
⑩	2.4	4.6	2.1	2.2	2.1
⑪	6.3	6.3	11.9	9.0	10.7
⑫	3.6	3.6	4.8	3.6	4.3
⑬	0.8	1.8	0.4	0.3	2.4
IC107 ②	4.6	4.5	4.5	4.5	4.4
③	2.3	2.3	2.2	0	2.1
④	2.6	2.8	2.8	2.8	3.3
⑤	1.5	1.4	1.4	1.4	2.3
⑥	2.9	2.9	2.9	2.9	2.1
⑦	2.6	2.6	2.6	2.6	2.9
⑧	2.9	2.9	2.9	2.9	2.6
⑨	2.6	2.6	2.8	2.8	2.8
⑩	3.2	3.2	5.4	5.4	5.3
⑪	4.5	4.6	5.0	5.0	3.7
⑫	6.3	6.3	6.1	6.1	6.0
IC109 ②	4.6	4.5	4.5	4.5	4.4
③	2.3	2.3	2.2	2.2	2.1
④	11.9	11.9	11.9	11.9	11.9
⑤	11.9	11.9	0.1	0	0.1
IC110 ③	2.3	2.4	2.2	2.2	2.0
④	7.2	7.2	7.2	7.2	8.3
⑤	5.6	5.8	5.8	5.6	6.2
⑥	11.9	11.9	11.9	11.9	7.8
⑦	0	7.9	7.9	7.9	7.8
⑧	3.7	3.7	3.5	3.5	3.5
IC111 ④	0.3	0.3	0.3	0.3	0
⑤	0.2	0	0.1	0.1	0.1
⑥	0	5.0	5.0	5.0	0
⑦	5.0	5.0	5.0	5.0	0
IC402 ②	3.1	3.9	2.9	3.0	3.0
③	0	2.3	2.3	0	2.2
④	2.9	2.9	2.9	0	2.9
IC403 ①	0.8	0.8	0.8	0.8	0.8
②	1.2	1.2	0.8	0.8	1.2
③	1.4	1.3	0.9	0.9	1.3
④	0.8	0.8	0.9	0.9	0.8
⑤	0.6	0.5	0.6	0.6	0
⑥	0.5	0.6	0.6	0.6	0.6
⑦	1.0	1.0	1.0	1.0	0.8
⑧	1.6	1.5	1.1	1.1	1.4
⑨	1.4	1.4	1.0	1.0	1.2
⑩	0.9	1.0	1.0	1.0	0.8
⑪	0.6	0.6	0.6	0.6	0
IC404 ⑥	3.0	3.0	3.0	3.0	4.5
⑦	4.9	4.9	4.9	4.9	4.7
⑧	5.6	5.6	5.6	5.6	5.6
⑨	5.6	5.6	5.6	5.6	5.6
⑩	0	0.1	0	0	0
⑪	3.8	4.0	4.1	4.2	4.0
⑫	7.1	6.6	8.0	8.0	7.7
⑬	1.4	1.3	1.2	1.1	1.2
⑭	7.0	7.3	8.1	7.8	7.8
⑮	1.4	1.3	1.2	1.1	1.2
⑯	7.8	7.8	7.7	7.8	8.0
⑰	6.9	7.1	7.8	7.7	7.6
⑱	1.2	1.2	1.0	1.0	1.2
⑲	7.2	7.2	7.2	7.2	8.3
⑳	7.2	7.2	7.2	7.2	6.9
㉑	6.6	6.6	6.6	6.6	5.5
IC405 ①	1.6	1.5	1.1	1.3	1.4
②	1.4	1.4	0.9	0	1.7
③	1.2	1.2	0.9	0	1.1
④	1.4	1.3	1.0	0	1.2
⑤	1.3	1.3	1.0	0	1.2
⑥	0.5	0.5	0.6	1.0	0.3
⑦	0.5	0.5	0.6	1.3	0.3
⑧	1.2	1.2	0.8	1.1	1.2
⑨	1.4	1.3	0.9	1.3	1.3
⑩	1.2	1.2	0.8	1.2	1.2
⑪	1.4	1.3	1.0	1.3	1.2
IC406 ①	4.8	5.1	4.8	4.8	4.8
②	0.6	0	0.9	0.9	0.8
③	1.0	0.9	1.0	1.0	0.8
④	1.0	1.0	1.1	1.1	0.8
⑤	5.1	5.1	4.9	4.9	4.9
IC407 ①	1.2	1.2	0.9	1.2	1.2
②	0.4	-0.1	0.5	0.3	0.4
③	1.4	1.3	1.0	1.3	1.2
④	0.6	0	0.7	0.5	0.5
⑤	2.0	1.8	2.0	2.0	2.0
⑥	11.7	10.7	11.6	11.3	11.7
⑦	5.5	5.5	5.5	5.5	5.4
⑧	5.5	5.5	5.5	5.5	5.4
⑨	1.4	1.4	1.0	1.3	1.2
⑩	0.6	-0.1	0.7	0.6	0.5
⑪	2.0	1.7	2.0	2.0	2.0
⑫	2.0	1.7	2.0	2.0	2.0
IC408 ①	3.1	2.9	2.9	3.1	3.7
②	4.1	3.8	3.9	4.1	4.2
IC409 ①	0	8.8	9.0	9.4	0
②	0	0.6	0.4	0.3	0.3
③	5.9	5.9	6.3	0	5.9
④	5.9	5.9	6.3	6.0	5.9
⑤	5.9	5.9	6.3	6.0	5.9
⑥	0.1	1.8	0.5	1.2	0.1



# A BOARD WAVEFORMS



## A BOARD (1/3) \* MARK LIST

	PVM-20M4U/E/A	PVM-20M2U/E
R414	10k: CHIP	0: CHIP

# : Not Used

## A BOARD (1/3) \* MARK

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC101 ②	2.3	2.4	2.2	2.2	2.0	2.3
③	4.5	4.6	4.5	4.4	4.4	4.5
④	4.1	3.4	0	0.1	0	0
⑤	3.4	3.5	3.5	3.5	3.1	3.5
⑥	0	0	0	0	4.8	0
⑦	0	0	0	0	0	4.9
⑧	4.9	5.0	0	0	0	0
⑨	5.0	5.0	0	5.0	0	0
⑩	5.0	5.0	0	0	0	0
⑪	0	5.0	0	0	0	0
⑫	0.1	0	0.1	0.1	4.9	0.1
⑬	5.0	5.0	5.0	5.0	0	5.0
⑭	5.0	5.0	5.0	5.0	4.9	0.1
⑮	5.0	5.0	5.0	5.0	5.0	0.1
⑯	4.2	4.1	4.6	5.0	3.9	3.9
⑰	4.0	4.0	4.6	5.0	3.6	3.7
⑱	0.3	4.4	0.1	0.7	0.1	0.1
⑲	4.2	0.1	4.3	4.2	4.2	4.3
⑳	4.0	3.4	3.6	3.7	3.9	4.0
㉑	0.5	0.9	1.0	0.8	3.1	1.9
㉒	3.0	2.5	2.6	2.3	3.8	2.2
㉓	3.6	3.0	2.9	3.2	3.9	4.0
㉔	4.0	4.0	4.0	4.0	2.9	4.0
IC103 ①	0.2	0	0.2	0.2	0	0
IC104 ④	2.3	2.3	2.2	2.2	2.0	2.3
⑤	3.5	3.5	3.5	3.5	3.1	3.5
IC105 ②	2.3	2.3	2.2	2.2	0	2.3
③	0	0.1	0.1	0	11.8	0
④	2.6	2.7	2.7	2.6	2.8	2.6
⑤	5.4	5.4	5.4	5.4	6.6	6.1
IC106 ④	2.3	2.3	2.2	2.2	2.1	2.3
⑤	5.4	5.4	5.4	5.4	4.1	5.4
⑥	2.4	2.4	2.4	2.4	0.6	2.4
⑦	7.8	7.8	7.8	7.7	5.5	7.8
⑧	5.1	5.1	5.1	5.1	4.0	5.1
⑨	0.1	10.5	10.5	10.5	10.9	10.5
⑩	3.1	3.1	2.6	3.1	2.7	2.5
⑪	2.4	4.8	2.1	2.2	2.1	3.2
⑫	6.3	6.3	11.9	9.0	10.7	3.7
⑬	3.6	3.6	4.8	3.6	4.3	9.5
⑭	0.8	1.8	0.4	0.3	2.4	3.1
IC107 ②	4.6	4.5	4.5	4.5	4.4	4.5
③	2.3	2.3	2.2	0	2.1	0
④	2.8	2.8	2.8	2.8	3.3	2.8
⑤	1.5	1.4	1.4	1.4	2.3	1.4
⑥	2.9	2.9	2.9	2.9	2.1	2.9
⑦	2.6	2.6	2.6	2.6	2.9	2.6
⑧	2.9	2.9	2.9	2.9	2.6	2.9
⑨	2.6	2.6	2.8	2.8	2.8	2.8
⑩	3.2	3.2	5.4	5.4	5.3	5.4
⑪	4.5	4.6	5.0	5.0	3.7	5.0
⑫	6.3	6.3	6.1	6.1	6.0	6.1
IC108 ②	4.6	4.5	4.5	4.5	4.4	4.4
③	2.3	2.3	2.2	2.2	2.1	2.3
④	11.9	11.9	11.9	11.9	11.9	0.1
⑤	11.9	11.9	0.1	0	0.1	11.8
IC110 ④	2.3	2.4	2.2	2.2	2.0	2.2
⑤	7.2	7.2	7.2	7.2	8.3	7.2
⑥	5.8	5.8	5.8	5.8	6.2	5.8
⑦	11.9	11.9	11.9	11.9	7.8	11.9
⑧	0	7.9	7.9	7.9	7.8	7.9
⑨	3.7	3.7	3.5	3.5	3.5	3.6
IC111 ④	0.3	0.3	0.3	0.3	0	0.3
⑤	0.2	0	0.1	0.1	0.1	0.1
⑥	0	5.0	5.0	5.0	0	5.0
⑦	5.0	5.0	5.0	5.0	0	5.0
IC402 ②	3.1	3.9	2.9	3.0	3.0	3.6
③	0	2.3	2.3	0	2.2	2.2
④	2.9	2.9	2.9	0	2.9	2.9
IC403 ①	0.8	0.8	0.8	0.8	0.8	0
②	1.2	1.2	0.8	0.8	1.2	0.9
③	1.4	1.3	0.9	0.9	1.3	0
④	0.8	0.8	0.9	0.9	0.8	1.4
⑤	0.6	0.5	0.6	0.6	0	0.6
⑥	0.5	0.6	0.6	0.6	0.6	0
⑦	1.0	1.0	1.0	1.0	0.8	1.1
⑧	1.6	1.5	1.1	1.1	1.4	1.6
⑨	1.4	1.4	1.0	1.0	1.2	1.5
⑩	0.9	1.0	1.0	1.0	0.8	1.1
⑪	0.6	0.6	0.6	0.6	0	0.6
IC404 ②	3.0	3.0	3.0	3.0	4.5	0
③	4.9	4.9	4.9	4.9	4.7	6.1
④	5.6	5.6	5.6	5.6	5.6	5.8
⑤	5.6	5.6	5.6	5.6	5.6	5.8
⑥	0	0.1	0	0	0	4.4
⑦	3.8	4.0	4.1	4.2	4.0	3.6
⑧	7.1	6.6	8.0	8.0	7.7	7.9
⑨	1.4	1.3	1.2	1.1	1.2	1.4
⑩	7.0	7.3	8.1	7.8	7.8	7.8
⑪	1.4	1.3	1.2	1.1	1.2	1.5
⑫	7.8	7.8	7.7	7.8	8.0	7.7
⑬	6.9	7.1	7.8	7.7	7.6	7.6
⑭	1.2	1.2	1.0	1.0	1.2	1.3
⑮	7.2	7.2	7.2	7.2	8.3	7.2
⑯	7.2	7.2	7.2	7.2	6.9	7.0
⑰	6.6	6.6	6.6	6.6	5.5	0
IC405 ①	1.6	1.5	1.1	1.3	1.4	1.6
②	1.4	1.4	0.9	0	1.7	1.5
③	1.2	1.2	0.9	0	1.1	1.2
④	1.4	1.3	1.0	0	1.2	1.4
⑤	1.3	1.3	1.0	0	1.2	1.4
⑥	0.5	0.5	0.6	1.0	0.3	0.2
⑦	0.5	0.5	0.6	1.3	0.3	0.2
⑧	1.2	1.2	0.8	1.1	1.2	1.3
⑨	1.4	1.3	0.9	1.3	1.3	1.4
⑩	1.2	1.2	0.8	1.2	1.2	1.3
⑪	1.4	1.3	1.0	1.3	1.2	1.5
IC406 ①	4.8	5.1	4.8	4.8	4.8	5.1
②	0.8	0	0.9	0.9	0.8	1.0
③	1.0	0.9	1.0	1.0	0.8	1.1
④	1.0	1.0	1.1	1.1	0.8	1.1
⑤	5.1	5.1	4.9	4.9	4.9	5.1
IC407 ①	1.2	1.2	0.9	1.2	1.2	1.3
②	0.4	-0.1	0.5	0.3	0.4	0.5
③	1.4	1.3	1.0	1.3	1.2	1.4
④	0.6	0	0.7	0.5	0.5	0.7
⑤	2.0	1.8	2.0	2.0	2.0	2.0
⑥	11.7	10.7	11.6	11.3	11.7	11.2
⑦	5.5	5.5	5.5	5.5	5.4	8.5
⑧	5.5	5.5	5.5	5.5	5.4	8.4
⑨	1.4	1.4	1.0	1.3	1.2	1.5
⑩	0.6	-0.1	0.7	0.6	0.5	0.6
⑪	2.0	1.7	2.0	2.0	2.0	2.0
⑫	2.0	1.7	2.0	2.0	2.0	2.0
IC408 ①	3.1	2.9	2.9	3.1	3.7	3.4
②	4.1	3.8	3.9	4.1	4.2	4.1
IC409 ①	0	8.8	9.0	9.4	0	7.5
②	0	0.6	0.4	0.3	0.3	1.6
③	5.9	5.9	6.3	0	5.9	5.9
④	5.9	5.9	6.3	6.0	5.9	5.9
⑤	5.9	5.9	6.3	6.0	5.9	5.9
⑥	0.1	1.8	0.5	1.2	0.1	0
⑦	0	10.7	8.6	6.9	0	10.7

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC410 ①	3.8	4.0	4.0	4.0	0	3.9
②	3.0	3.1	2.4	3.1	0	4.0
③	1.3	0.7	1.4	1.6	2.3	1.5
④	3.5	3.6	3.0	3.8	3.9	3.9
⑤	0.6	1.3	1.1	1.1	3.1	1.7
⑥	4.0	4.0	4.0	3.9	0	0
⑦	0	2.0	1.9	1.8	2.5	1.4
⑧	2.0	2.3	2.3	2.0	1.8	3.0
IC411 ①	4.1	4.0	3.9	3.8	4.2	4.1
②	1.8	2.0	1.9	1.8	2.5	1.3
③	2.0	2.3	2.3	2.1	1.8	3.0
IC412 ②	0.4	0.5	0.4	0.4	5.9	0.6
③	8.9	8.9	8.9	8.9	8.9	8.3
④	9.0	8.9	9.0	8.9	8.9	8.3
⑤	6.0	6.0	6.0	6.0	6.0	0
⑥	0.4	0.5	0.4	0.4	5.9	0.5
IC413 ②	7.9	8.0	8.0	8.0	0	6.9
③	0	5.5	5.5	5.5	5.4	0
④	5.5	5.5	5.5	5.5	5.4	8.6
⑤	3.1	3.1	3.1	3.1	0	5.1
⑥	3.1	3.1	3.1	3.1	6.0	5.1
⑦	7.9	7.9	8.0	7.9	6.3	6.9
Q102 B	10.9	10.9	10.9	10.9	10.7	10.9
C	8.1	8.1	8.1	8.1	0	8.1
E	11.5	11.5	11.5	11.5	11.3	11.5
Q104-1 B	-0.2	0	-0.2	0	0	-0.2
Q107 B	5.0	5.0	5.0	5.0	5.0	0.1
C	0	0	0	0	0	5.0
Q108 C	2.6	2.6	2.6	2.6	2.9	2.6
E	2.6	2.6	2.6	2.6	2.9	2.6
Q111 B	5.0	5.0	0	0	4.9	4.9
C	0.4	0.4	0	0	0.4	0.4
Q113 C	4.1	4.3	4.2	4.2	3.8	4.0
Q401 B	1.1	0.6	1.5	1.6	1.2	1.0
C	7.5	5.5	6.0	5.2	8.4	10.0
E	1.4	1.6	3.2	3.4	3.1	1.0
Q402 B	0.5	0.5	0.5	0.5	2.4	0.5
C	9.5	7.7	8.1	7.4	10.4	6.9
E	1.4	1.6	3.2	3.3	3.2	1.0
Q404 B	5.3	4.1	4.9	5.2	5.3	5.2
E	6.1	6.3	6.0	6.1	6.1	6.2
Q405 B	1.3	1.3	1.2	1.1	1.2	1.4
Q406 B	0.7	0.7	0	0.7	0.7	0.7
C	1.6	1.5	1.0	1.5	1.4	1.6
Q407 B	0	0	0	0	0	0.6
C	6.6	6.6	6.6	6.6	5.4	0
Q408 B	5.3	4.7	4.9	5.0	5.2	5.2
E	6.0	6.2	5.9	6.1	6.0	6.1
Q409 B	1.9	1.6	1.6	1.6	1.7	1.6
E	2.0	2.2	2.2	2.2	2.3	2.2
Q411 C	1.4	1.4	0.9	1.3	1.3	1.4
Q412 B	1.3	1.3	1.0	1.3	1.1	1.4
E	2.0	1.9	1.7	1.9	1.8	2.0
Q413 G	2.0	-15.1	1.6	-2.2	1.8	-2.1
D	2.0	1.9	-4.3	0	2.2	2.0
S	2.0	1.9	1.7	1.9	1.8	2.0
Q417 B	1.4	1.4	1.2	1.2	1.2	1.4
Q418 C	2.1	2.1	1.7	1.7	1.7	2.0
Q419 B	1.4	1.4	1.2	1.1	1.2	1.5
E	2.0	1.9	1.7	1.7	1.8	2.0
Q420 B	1.2	1.2	1.0	1.0	1.2	1.3
E	1.8	1.8	1.6	1.6	1.8	1.9
Q422 C	2.1	2.1	1.7	1.7	1.8	2.0
Q423 B	0.5	0.3	0.4	0.4	0.4	0.2
Q425 C	4.5	4.5	4.5	4.5	4.7	4.5
Q426 C	0.8	0.8	0.7	0.7	0.7	0
Q429 B	0.1	0.8	0.4	0.4	0.1	0.1
E	0	-2.3	-1.2	-1.2	0.4	0.4
Q432 B	-0.3	-3.8	-3.4	-2.7	-0.1	-3.9
C	11.9	11.6	11.8	11.8	12.0	11.6
Q433 B	0	-0.1	0	0	0	2.7
C	3.0	3.0	3.0	3.0	4.5	0
Q434 B	-0.1	0	0	0	-0.1	0.4
C	3.6	4.7	4.5	4.8	2.9	0
Q438 B	-0.4	-2.9	-3.1	-2.4	0	-2.4
C	11.7	11.4	11.7	11.7	11.6	11.7
Q439 B	2.0	1.9	1.8	1.7	1.8	2.0
E	2.6	2.5	2.4	2.4	0	2.6
Q440 B	2.6	2.5	2.5	2.5	2.4	2.7
Q441 G	-1.1	-13.0	1.7	-4.8	0	-0.7
D	2.0	1.9	-8.1	1.9	1.8	2.0
S	2.0	1.9	1.6	1.9	1.8	2.0
Q442 B	1.3	1.3	1.1	1.1	1.1	2.1
E	0.9	0.9	0.7	0.7	0.7	1.5
Q444 C	1.2	1.1	1.2	1.4	2.2	1.3
Q445 C	0.4	1.2	1.4	1.3	0.3	0.4

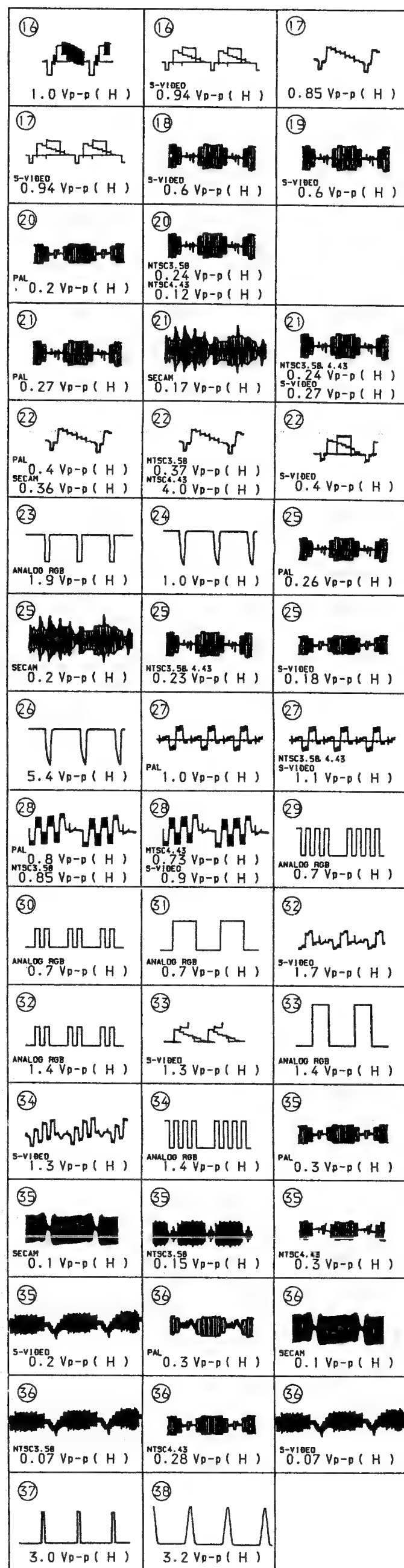


# A BOARD (2/3) \* MARK

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC301 ①	2.8	0	2.8	3.0	3.0	2.3
②	2.0	0	1.8	1.7	1.7	3.5
IC302 ①	2.9	2.9	2.9	0.3	2.9	2.9
②	5.3	5.1	4.5	4.5	4.5	4.5
③	10.5	8.4	0	0	0	0
IC303 ①	2.3	2.6	2.2	2.2	2.6	2.8
②	0.1	4.2	0.6	0.6	0.6	0.1
③	3.9	2.8	3.1	3.1	3.3	3.9
IC304 ①	2.2	2.6	2.2	2.2	2.2	2.2
②	9.4	0.1	9.4	9.4	9.4	9.4
③	7.3	7.3	2.5	2.5	2.6	2.5
④	7.3	7.3	2.5	2.6	2.6	2.5
⑤	1.9	1.9	2.2	2.2	2.2	2.2
⑥	2.5	2.5	2.2	2.2	2.3	2.2
IC305 ①	2.8	2.8	2.8	0	2.8	2.8
②	2.5	1.1	2.5	2.4	2.4	1.3
③	4.1	4.1	4.1	4.1	4.2	4.5
④	0.4	0.2	0	0	0	0.1
⑤	2.6	2.6	2.5	2.4	2.5	2.7
⑥	0	0	0.8	0.8	0.9	0.9
⑦	2.1	2.7	1.9	1.9	1.9	2.7
IC306 ①	8.1	8.1	8.1	8.1	8.1	0
②	0	0	0	0.1	0.1	4.4
IC309 ①	3.6	0	3.6	3.6	3.6	3.6
②	0	0	0	0	0	4.4
IC310 ①	6.2	6.2	6.2	6.2	6.2	5.9
②	6.3	6.3	6.2	6.2	6.2	5.9
③	5.9	5.9	6.0	6.3	5.9	5.9
IC311 ①	0	6.2	6.2	6.2	6.2	6.2
②	6.2	6.2	6.2	6.2	6.2	5.9
③	6.2	6.3	6.3	6.2	6.2	5.9
④	3.3	3.3	2.9	2.9	2.9	0
⑤	5.9	5.9	5.9	6.2	5.8	5.9
⑥	0.4	0.4	0.4	0.4	0.5	0.7
IC312 ①	3.6	0	3.6	3.6	3.6	3.6
②	0	0	0	12.0	0.1	4.5
IC313 ①	0	6.3	0	6.3	6.3	6.3
IC314 ①	0	3.0	7.6	0	3.0	0
②	0	0	0	0	2.9	0.1
IC315 ①	0.4	0.4	0.4	0.4	0.4	0.6
②	0.6	0	0.6	0.6	0.6	0.6
③	9.4	9.3	9.3	9.2	9.3	9.4
④	2.5	2.5	2.5	2.5	2.5	7.2
⑤	0.4	0.4	0.4	0.4	0.4	0.6
⑥	0.4	0.4	0.4	0.4	0.4	0.6
IC317 ①	2.0	0	2.0	2.1	2.0	12.0
②	12.0	0	12.0	12.0	12.0	12.0
③	10.7	10.6	10.6	10.6	10.5	10.7
④	9.4	9.4	9.4	9.4	9.1	9.4
IC318 ①	11.5	11.5	0	11.4	11.4	11.4
IC320 ①	6.3	6.3	6.3	6.3	6.3	0
②	3.0	0	0	3.1	0	0
③	0	0	0	0	3.3	0
IC321 ①	0	0.1	0.1	0	2.9	0
②	0	0	0	0	0.1	2.7
IC322 ①	5.8	5.9	6.0	6.3	5.9	5.9
IC323 ①	6.2	6.3	6.2	6.2	6.2	5.9
②	0	5.6	5.6	5.6	5.6	5.6
IC324 ①	6.2	6.2	6.2	6.2	6.2	5.9
IC326 ①	5.9	5.9	6.0	6.3	5.9	5.9
②	5.9	5.9	5.9	6.2	5.8	5.9
③	5.9	5.9	5.9	6.2	5.8	5.9
④	1.7	1.9	1.6	1.6	2.1	2.1
⑤	2.4	1.0	2.3	2.3	2.3	4.6
⑥	0	-0.1	10.8	0	-0.1	0
⑦	6.3	6.3	6.3	6.3	6.2	5.9
⑧	6.3	6.3	6.3	6.3	6.2	5.9
⑨	6.3	6.3	6.2	6.2	6.2	5.9

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC326 ①	6.2	6.2	6.2	6.2	6.2	5.9
②	6.2	6.2	6.2	6.3	6.2	5.9
③	6.2	6.2	6.2	6.2	6.2	5.9
IC350 ①	6.6	6.5	6.4	6.3	6.1	6.9
②	6.2	6.2	6.2	6.3	6.0	6.4
③	6.2	6.2	6.2	6.3	6.0	6.4
Q300 B	2.5	2.5	2.2	2.2	2.2	2.2
C	10.2	10.2	10.4	10.5	10.4	10.5
E	1.9	1.9	1.6	1.6	1.6	1.6
Q301 E	8.6	8.5	8.2	8.3	8.5	9.8
Q303 E	5.7	5.7	5.7	5.7	5.5	5.7
Q304 B	6.3	6.3	6.3	6.4	6.2	6.3
E	5.7	5.7	5.7	5.7	5.5	5.7
Q305 B	8.6	8.5	8.2	8.3	8.5	9.8
E	7.9	7.9	7.6	7.7	7.9	9.1
Q307 E	1.4	1.4	1.1	1.2	1.4	2.7
Q309 B	1.4	1.4	1.1	1.2	1.4	2.6
C	0.1	0.1	0.2	0.1	0.1	0
E	0.7	1.8	1.7	1.8	0	1.8
Q312 C	8.2	8.2	8.6	8.3	8.3	8.1
Q313 B	8.2	8.2	8.6	8.3	8.2	8.1
E	8.8	8.8	9.3	9.0	8.9	8.7
Q314 B	11.9	6.4	11.9	11.9	11.9	11.9
C	0	11.9	0	0	0	0
Q315 B	3.3	3.2	2.9	3.1	3.2	3.3
E	3.9	3.9	3.5	3.8	3.8	4.0
Q318 B	12.1	12.0	11.7	11.9	12.1	12.1
C	1.0	1.0	1.2	1.0	1.0	0.9
Q322 B	2.4	2.4	2.3	2.3	5.6	2.4
E	1.8	1.8	1.8	1.8	5.0	1.8
Q323 B	5.0	5.0	0	0	0	0
C	0	0	3.5	3.5	3.5	3.6
Q324 B	4.1	4.2	0	0	0	0
C	0	0	0.8	0.8	0.8	0.9
Q328 B	2.2	2.2	2.2	2.2	2.0	1.3
C	2.8	2.8	2.8	2.8	0	0
Q329 D	2.1	2.1	2.2	2.4	0	2.2
G	0	0	1.6	0	2.9	2.8
Q332 B	4.9	5.0	0	4.9	0	0
C	0	0	4.4	0	4.3	4.4
Q333 B	1.7	1.7	1.9	1.8	1.7	1.7
E	1.5	1.5	1.7	1.5	1.5	1.4
Q336 G	4.7	4.6	4.6	4.7	4.2	4.8
D	4.3	4.3	4.3	4.3	4.5	4.3
Q339 B	12.3	12.5	12.5	12.4	12.5	12.3
Q347 B	0.1	4.2	0.1	0.1	0.6	0.1
C	9.4	0.1	9.4	9.4	9.4	9.4
Q349 B	2.8	2.7	2.7	2.7	2.2	2.8
E	3.4	3.3	3.4	3.4	2.8	3.4
Q354 B	12.0	0.6	0	0	0	0
E	12.0	0.4	0	0	0	-0.2
Q358 E	2.2	2.2	0	2.2	2.2	2.2
Q360 I	6.2	6.2	6.2	6.3	6.1	6.4
3	6.2	6.2	6.2	6.3	6.0	6.4
5	1.3	4.7	2.2	4.1	5.3	3.8
Q361 B	4.9	4.9	5.0	5.0	5.0	0.8
C	0.1	0	0	0	0.1	4.9
Q362 C	9.0	9.0	9.0	9.5	9.2	8.5
Q364 C	3.3	3.3	2.9	2.9	2.8	2.9
Q365 B	0.4	0	0.3	0.3	0.4	0.4
Q369 B	0.8	0.9	0.8	0.8	0.9	4.9
Q372 B	0	0	0	0	0	4.9
C	11.7	11.7	11.8	11.8	11.7	0
Q374 B	10.4	10.3	10.1	10.3	10.7	6.4
C	0	0	0	0	6.2	6.7
E	6.4	6.4	6.3	6.3	6.1	6.7
Q375 B	10.7	10.8	10.7	10.7	10.7	5.9
C	0	0	0	0	6.3	6.4
E	6.2	6.2	6.2	6.2	6.0	6.4

# A BOARD WAVEFORMS

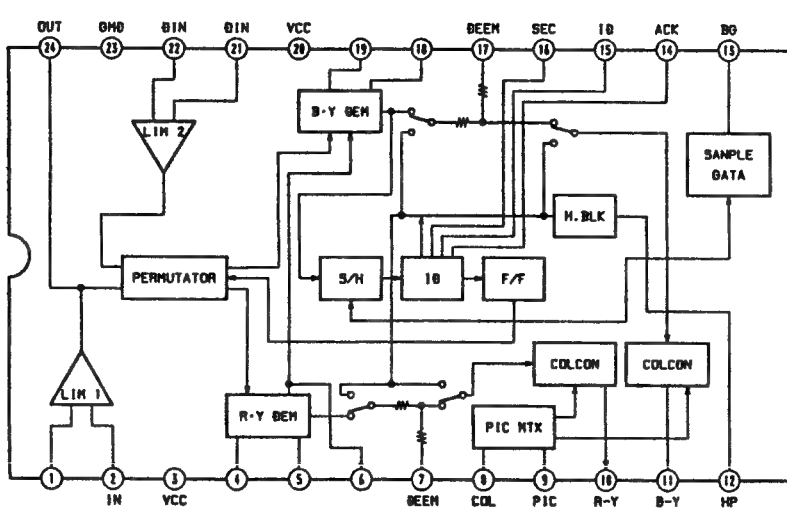


# A BOARD (2/3) \* MARK LIST

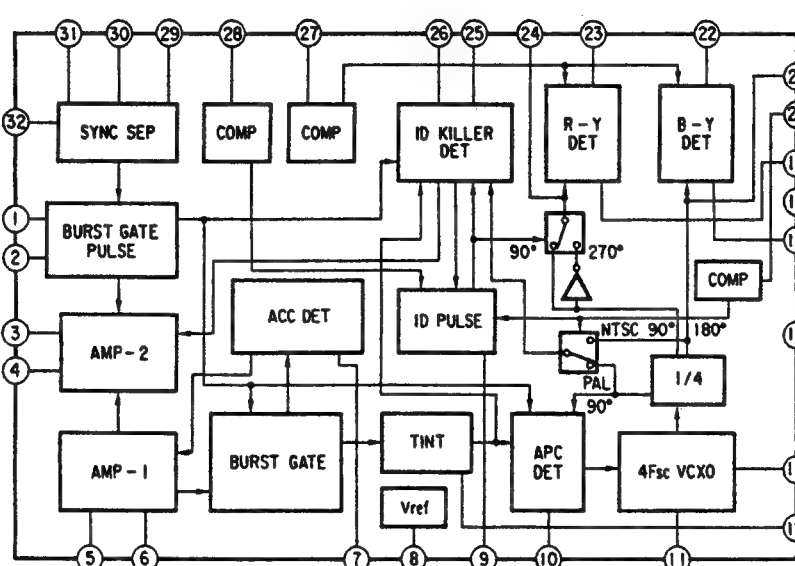
	PVM-20M4U/E/A	PVM-20M2U/E
C525	0.0115 2kV : PP	0.012 2kV : PP
C1524	100	#
C1525	0.0047 2kV E	#
C1531	0.1 25V B :CHIP	#
C1532	47 25V	#
C1534	47 25V	#
C1535	47 25V	#
C1536	0.1 :MPS	#
C1537	0.33 100V :MPS	#
CN509	3P WHT :S-MICRO	#
D544	MA111	#
D545	MA111	#
D546	V11N	#
D548	RD16ESB2	#
IC511	LA6500-FA	#
IC512	NJM79M12FA	#
L506	1-459-087-00	1-459-104-00
L509	1-459-087-00	1-459-104-00
Q526	2SC4686A	#
Q527	2SC4686A	#
Q531	2SA1037K	#
Q532	IRF520	#
R562	47 1/4W : FPRD	22 1/4W : FPRD
R566	47k : RN-CP	27k : RN-CP
R574	47k : CHIP	#
R577	10k : CHIP	#
R581	1k : CHIP	#
R584	3.9k : CHIP	10k : CHIP
R1506	1k : CHIP	470 : CHIP
R1539	100k : CHIP	#
R1542	22 : FPRD	#
R1564	560 : RN-CP	#
R1580	27k : CHIP	#
R1581	10M 1W : RS	#
R1582	2M 1W : RS	#
R1583	470 1/2W : RF	#
R1584	9.1k : RN-CHIP	#
R1585	1.8k : CHIP	#
R1586	47k : RN-CHIP	#
R1587	2.2k : CHIP	#
R1588	2.2 : CHIP	#
R1590	10 : CHIP	#
R1591	0.47 : FPRD	#
R1592	4.7k 1/2W : FPRD	#
R1593	8.2 1/2W : FPRD	#
R1594	8.2 1W : RS	#
R1599	10k 1/2W : RC	#
R2506	150k : CHIP	120k : CHIP
R2507	330k : CHIP	220k : CHIP

# : Not Used


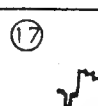



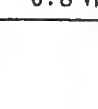
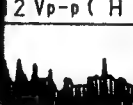

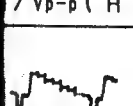
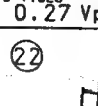
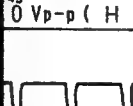
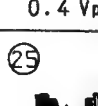
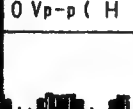
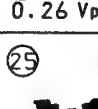
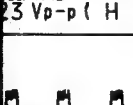
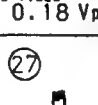
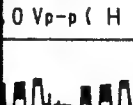
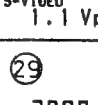
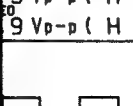
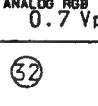
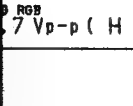
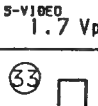
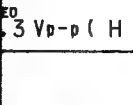
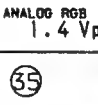
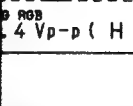
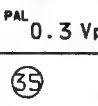
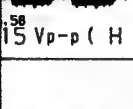
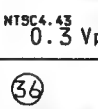
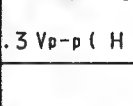
# A BOARD IC303 CXA1214P

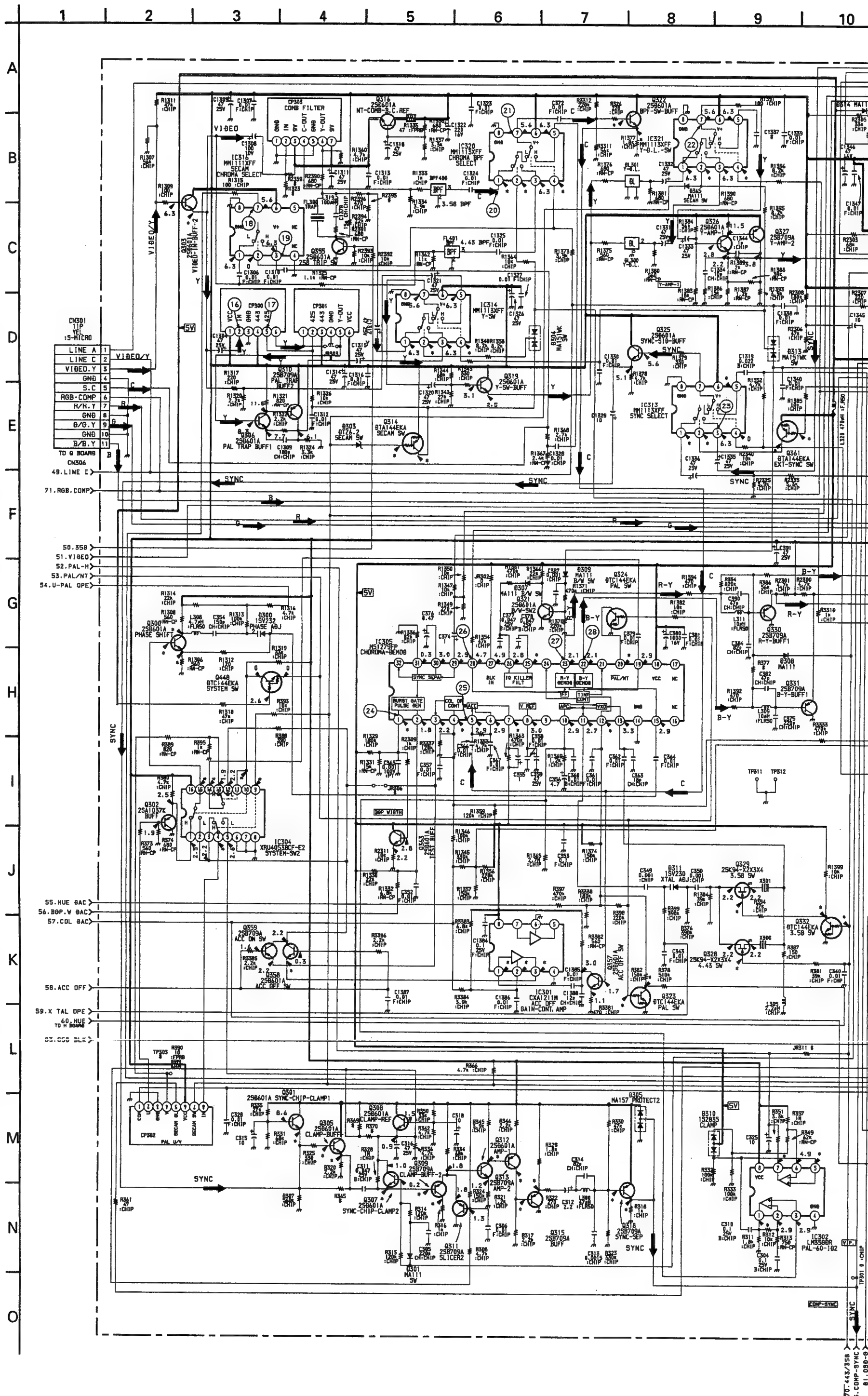


# A BOARD IC305 M51279FP

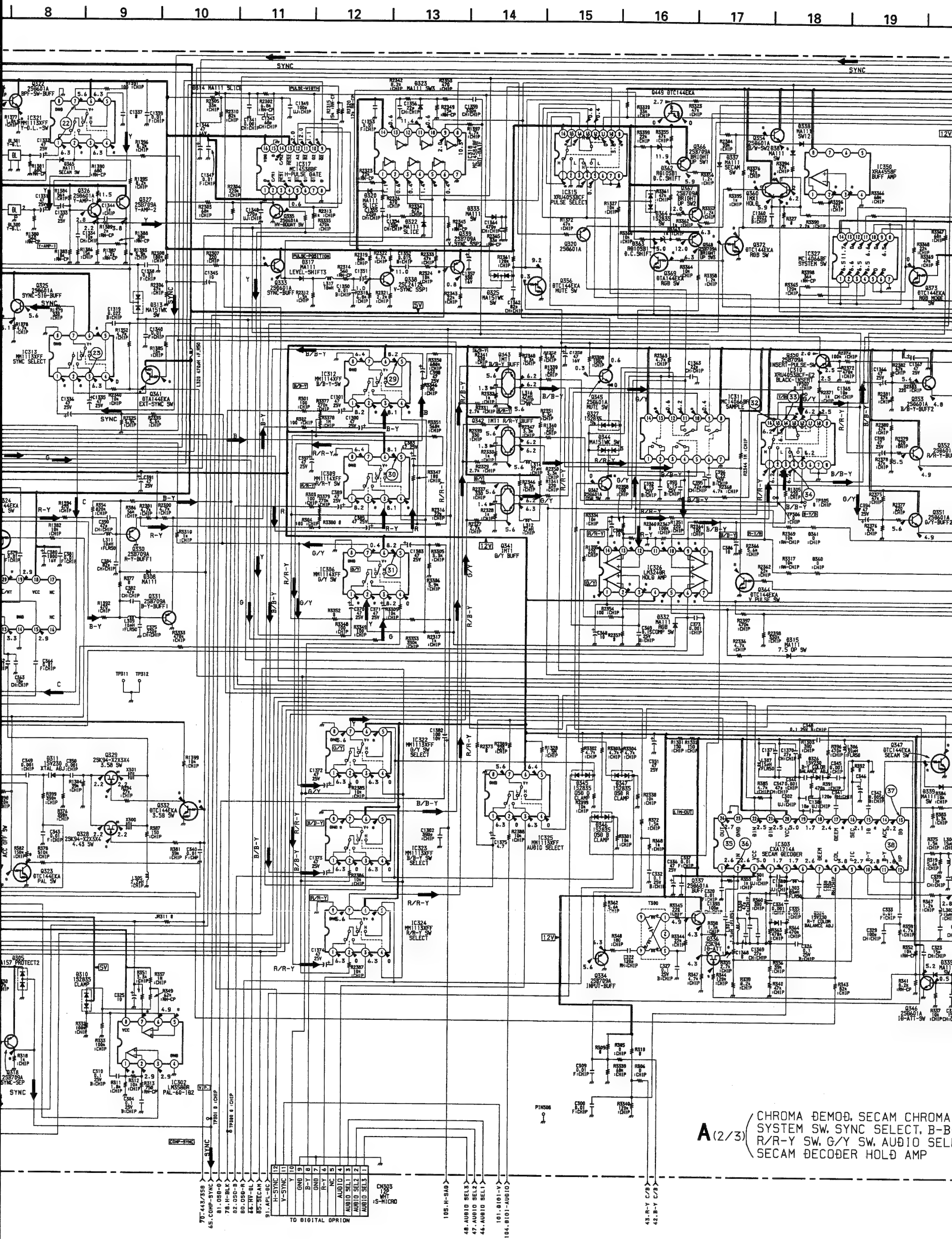




MS	
 ED 94 Vp-p ( H )	⑪  0.85 Vp-p ( H )
 ED 6 Vp-p ( H )	⑲  S-VVIDEO 0.6 Vp-p ( H )
 58 24 Vp-p ( H ) 43 2 Vp-p ( H )	⑳  NTSC3.58 4.43 0.24 Vp-p ( H ) S-VVIDEO 0.27 Vp-p ( H )
 58 27 Vp-p ( H ) 43 0 Vp-p ( H )	㉒  S-VVIDEO 0.4 Vp-p ( H )
 0 Vp-p ( H )	㉕  PAL 0.26 Vp-p ( H )
 58 4.43 23 Vp-p ( H )	㉕  S-VVIDEO 0.18 Vp-p ( H )
 0 Vp-p ( H )	㉗  NTSC3.58 4.43 S-VVIDEO 1.1 Vp-p ( H )
 43 3 Vp-p ( H ) ED 9 Vp-p ( H )	㉙  ANALOG RGB 0.7 Vp-p ( H )
 RGB 7 Vp-p ( H )	㉚  S-VVIDEO 1.7 Vp-p ( H )
 ED 3 Vp-p ( H )	㉛  ANALOG RGB 1.4 Vp-p ( H )
 RGB 4 Vp-p ( H )	㉝  PAL 0.3 Vp-p ( H )
 58 15 Vp-p ( H )	㉝  NTSC4.43 0.3 Vp-p ( H )
 3 Vp-p ( H )	㉞  SECAM 0.1 Vp-p ( H )
 43 28 Vp-p ( H )	㉞  S-VVIDEO 0.07 Vp-p ( H )
 2 Vp-p ( H )	

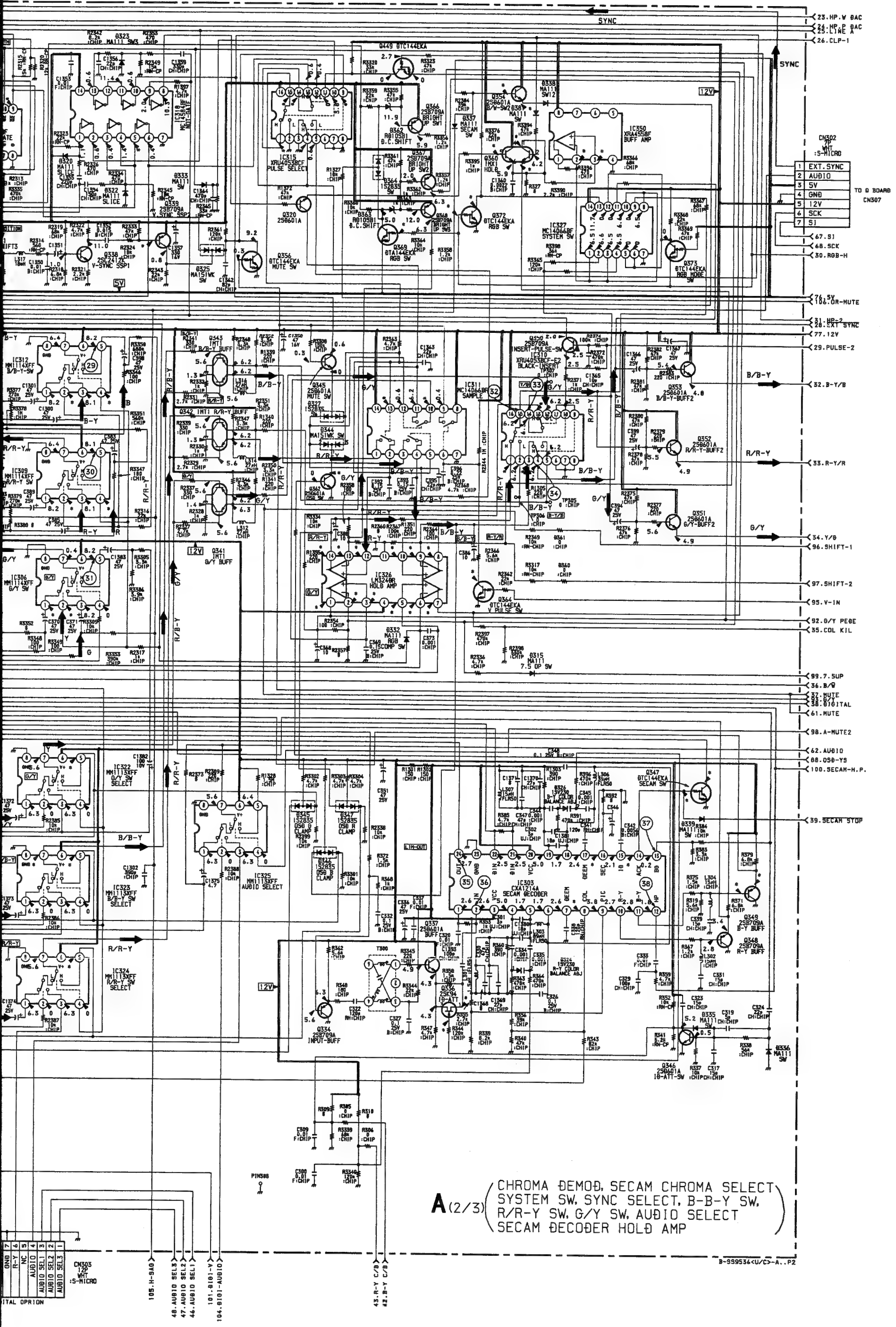




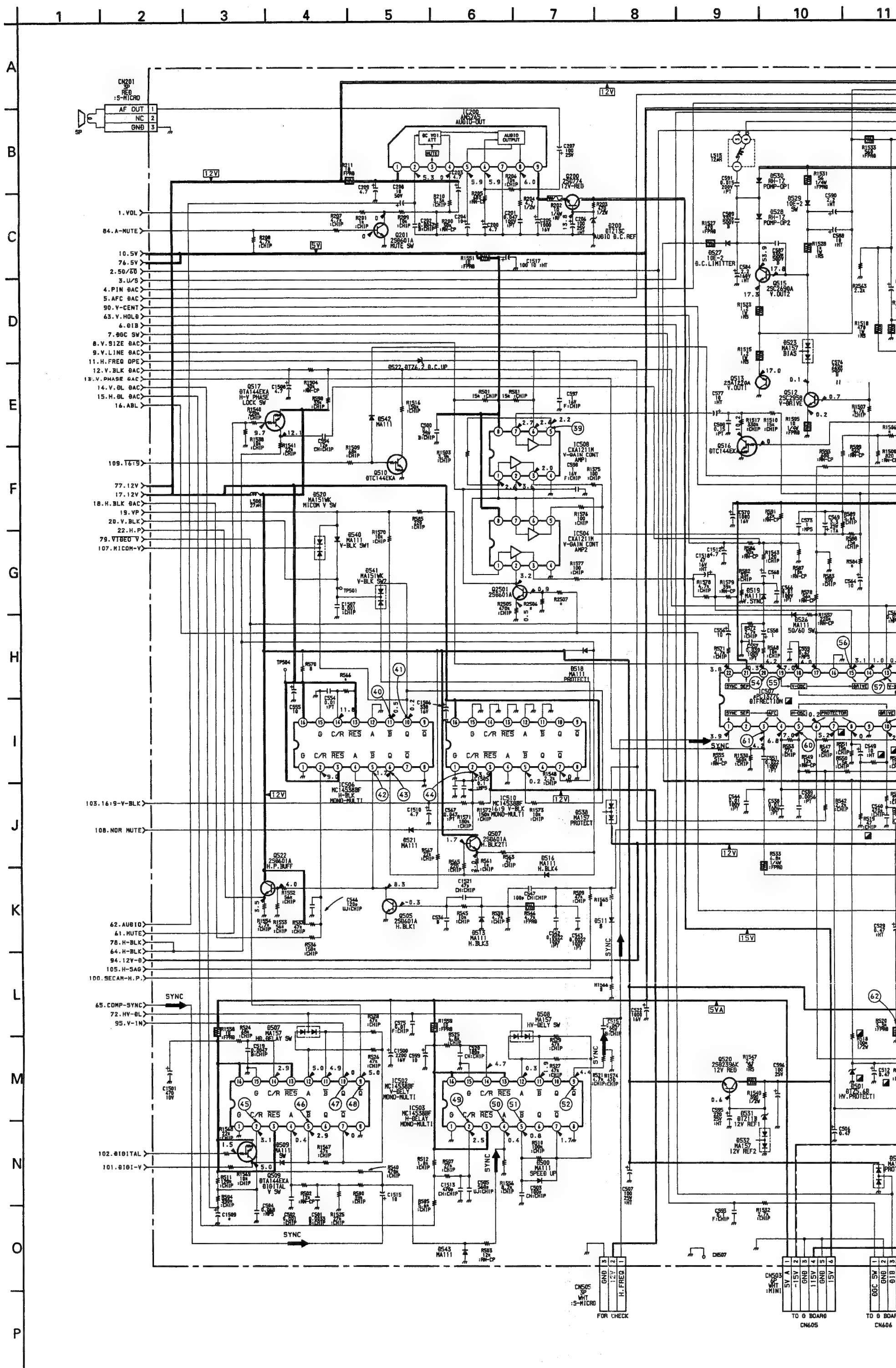


A(2/3) CHROMA DEMOD. SECAM CHROMA SYSTEM SW. SYNC SELECT. B-B R/R-Y SW. G/Y SW. AUDIO SEL SECAM DECODER HOLD AMP







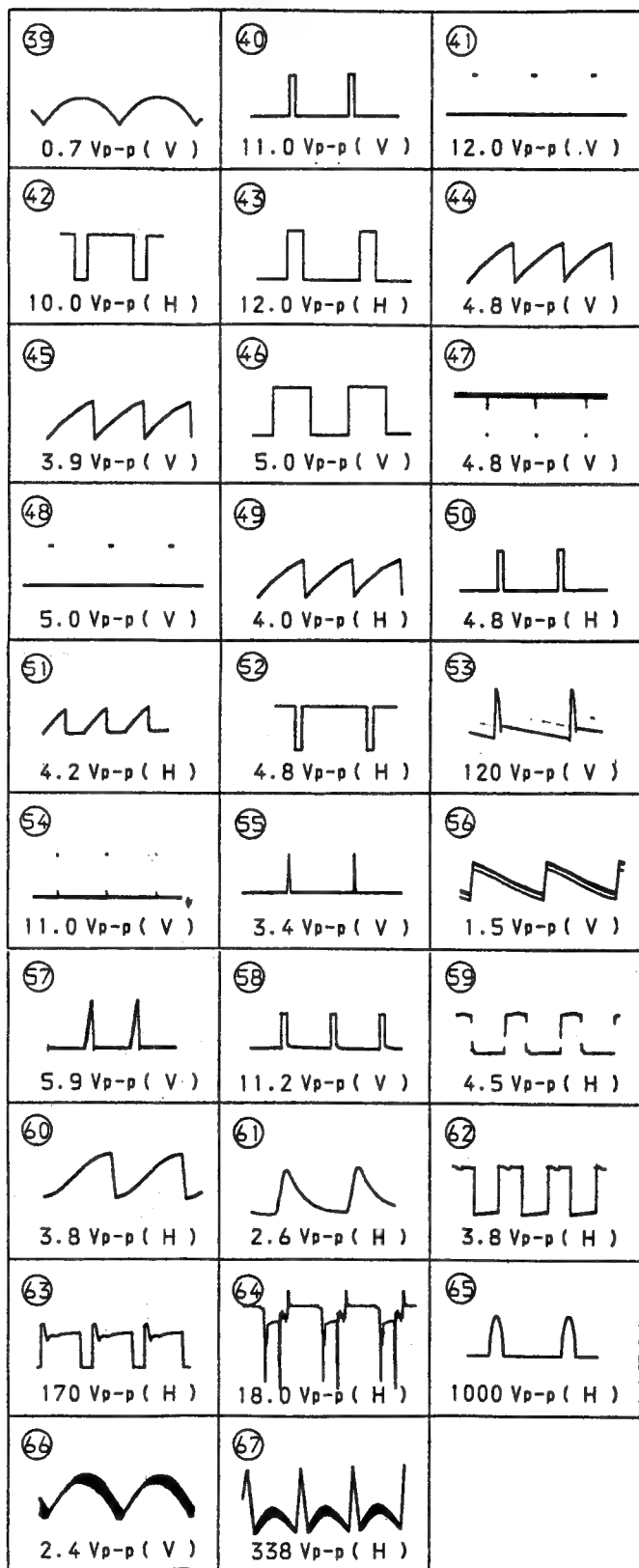




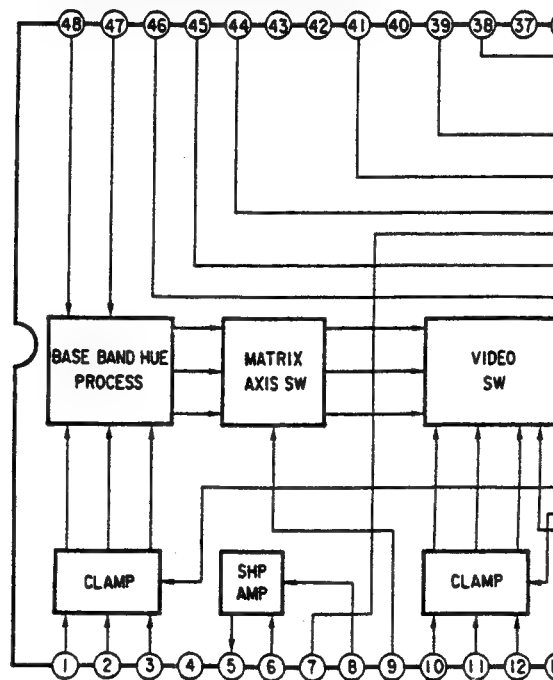




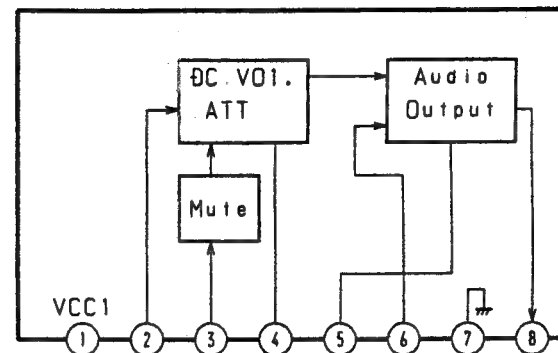
# A BOARD WAVEFORMS



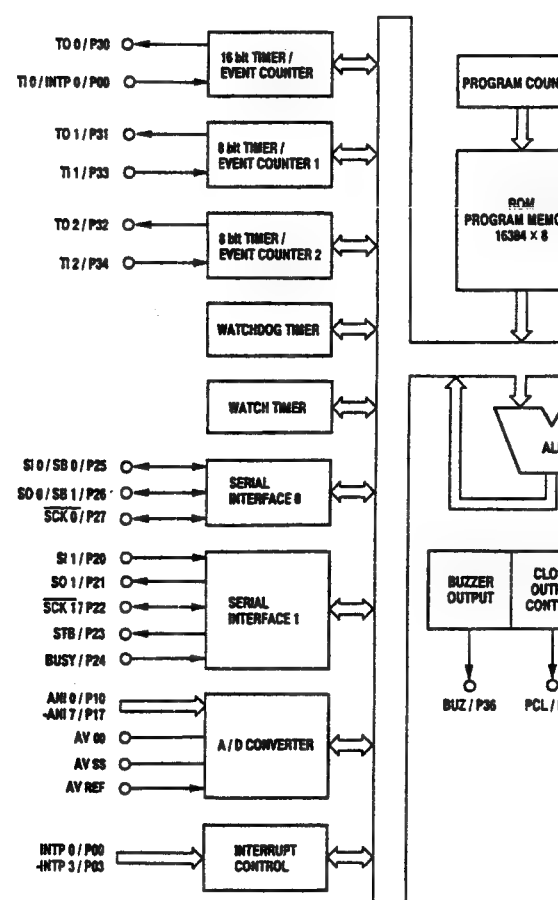
## A BOARD IC404 CXA1739S



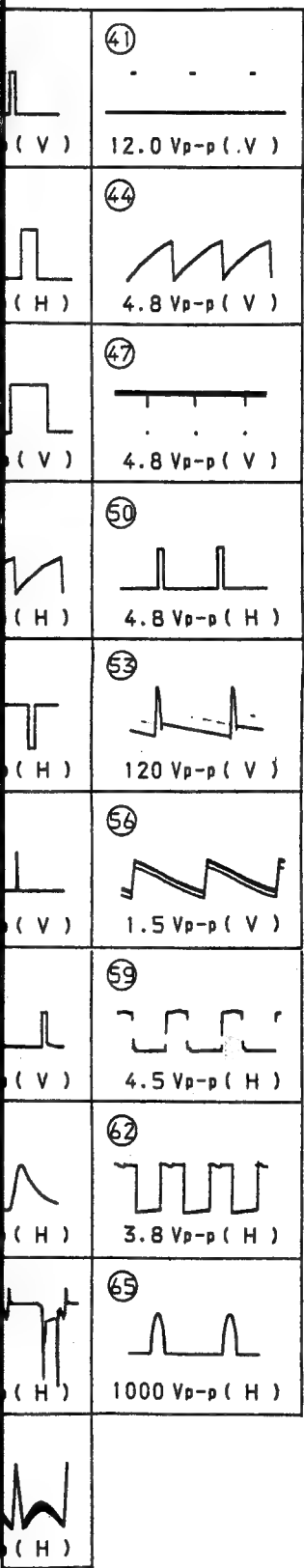
## A BOARD IC200 AN5265



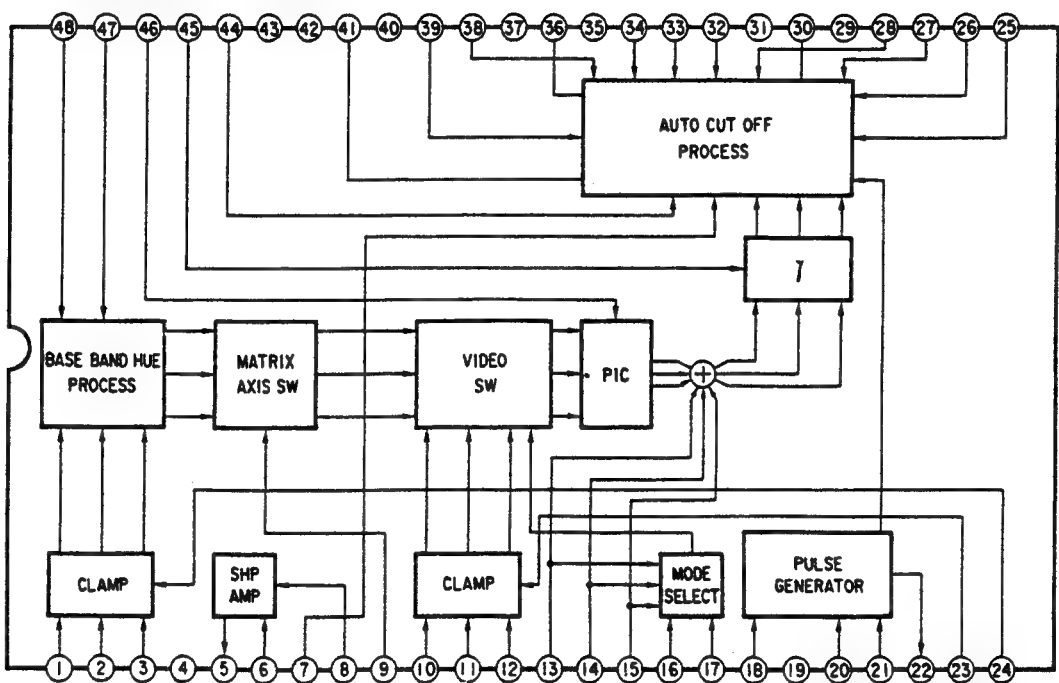
## A BOARD IC101 μPD78013YCW



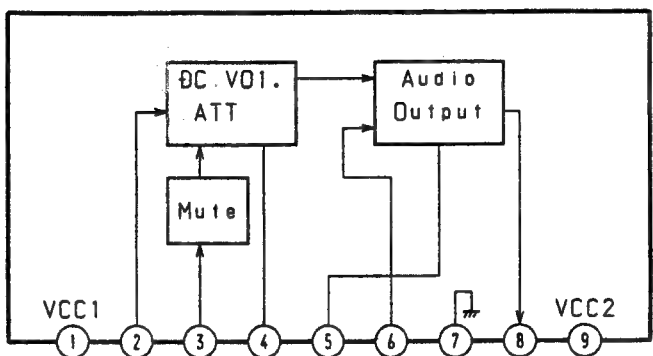




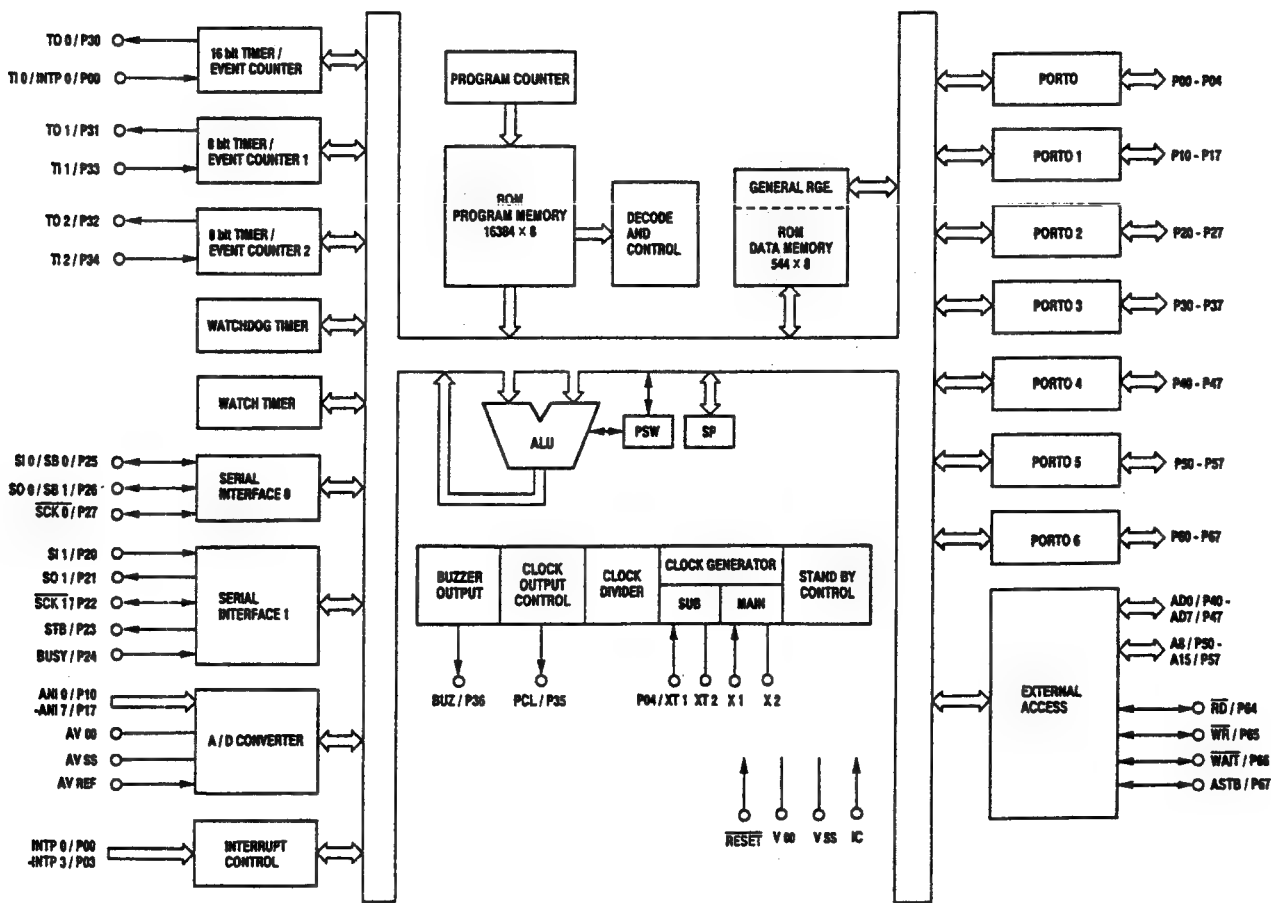
A BOARD IC404 CXA1739S



A BOARD IC200 AN5265



A BOARD IC101  $\mu$ PD78013YCW



Schematic diagram

G H J

Q X S boards

Schematic diagrams

A(3/3) board

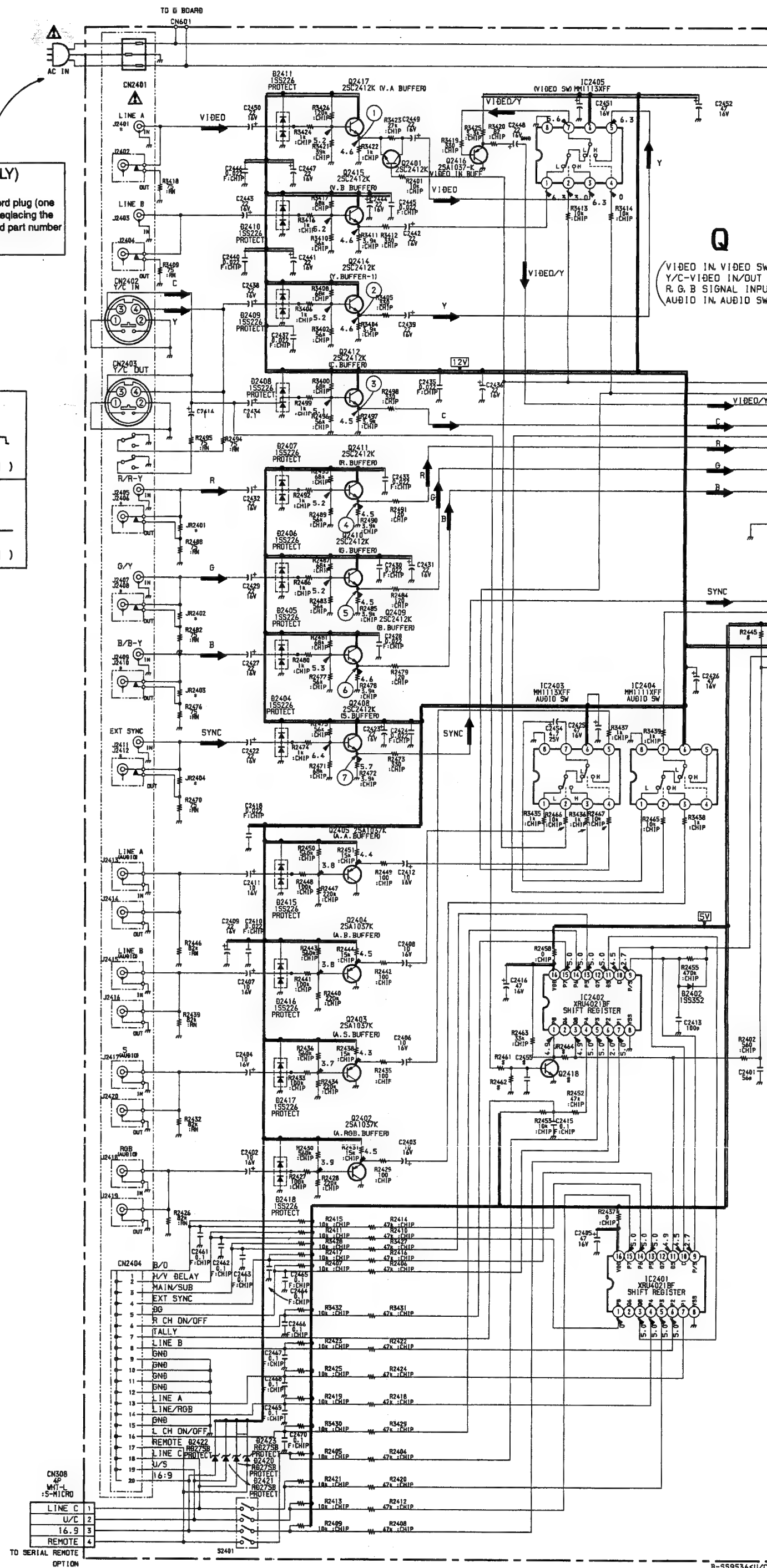
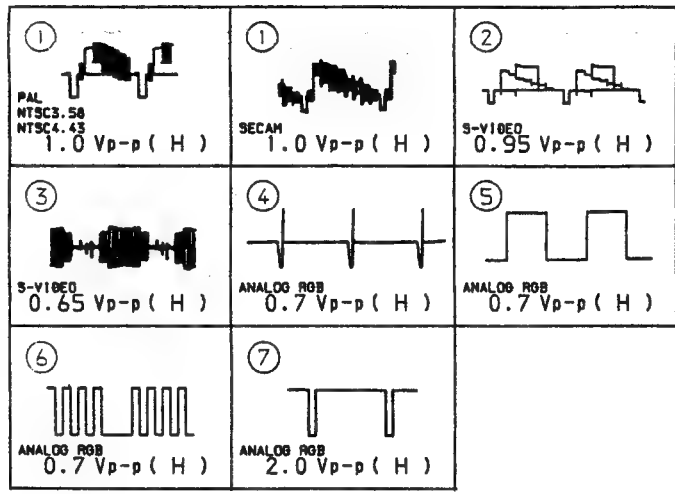


A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

**CAUTION (US MODEL ONLY)**

This set is equipped with a polarized ac power cord plug (one blade of the plug is wider than the other). When replacing the ac power cord, be sure to connect it with specified part number as shown in this diagram

**Q BOARD WAVEFORMS**



TO SERIAL REMOTE OPTION

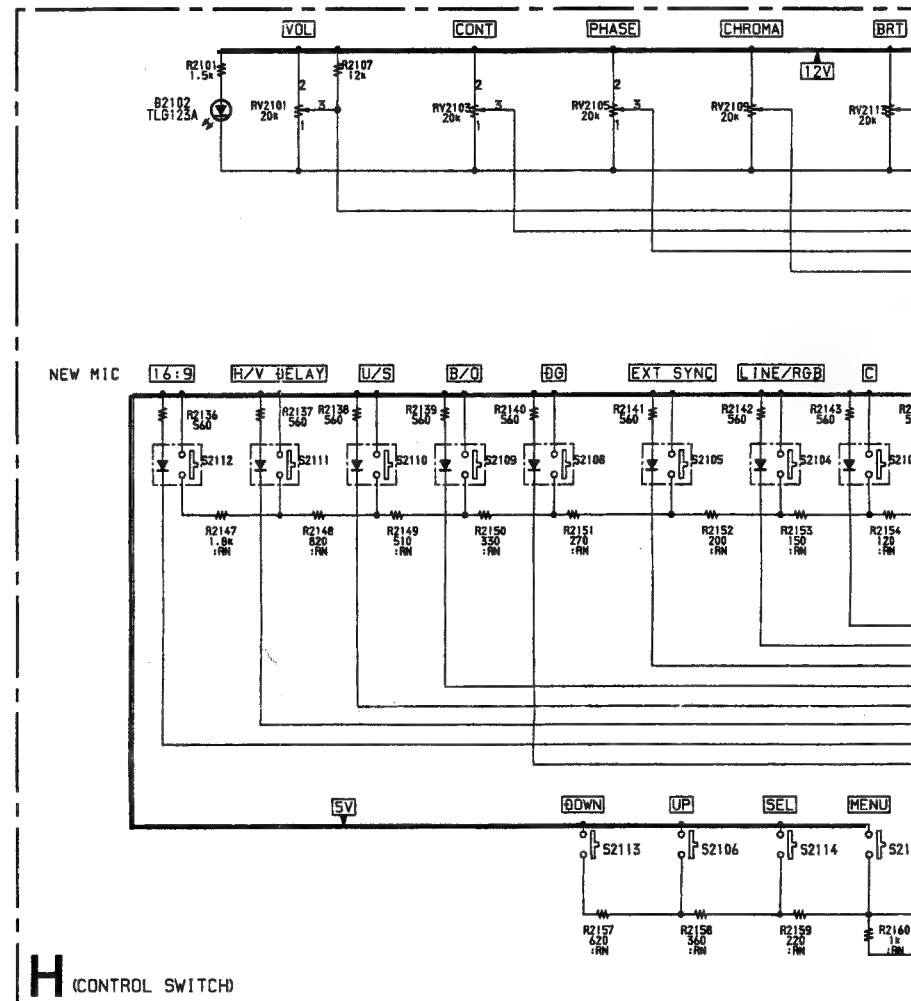
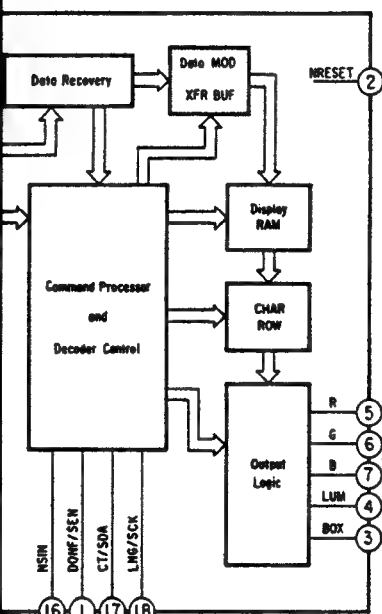
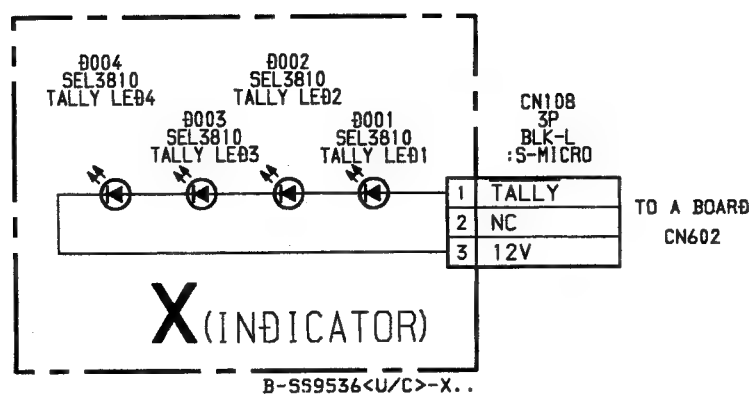
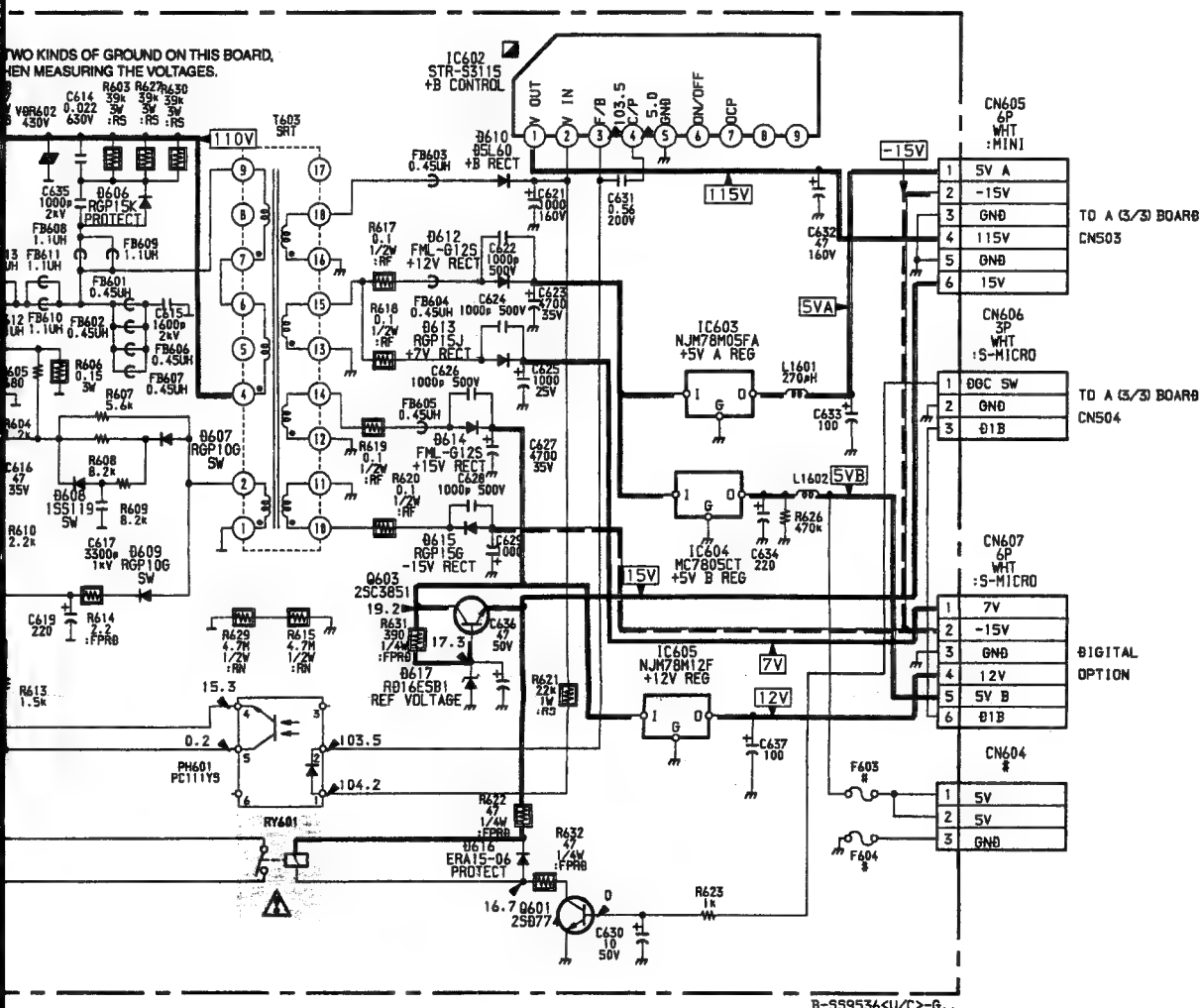
LINE C	1
U/C	2
16:9	3
REMOTE	4



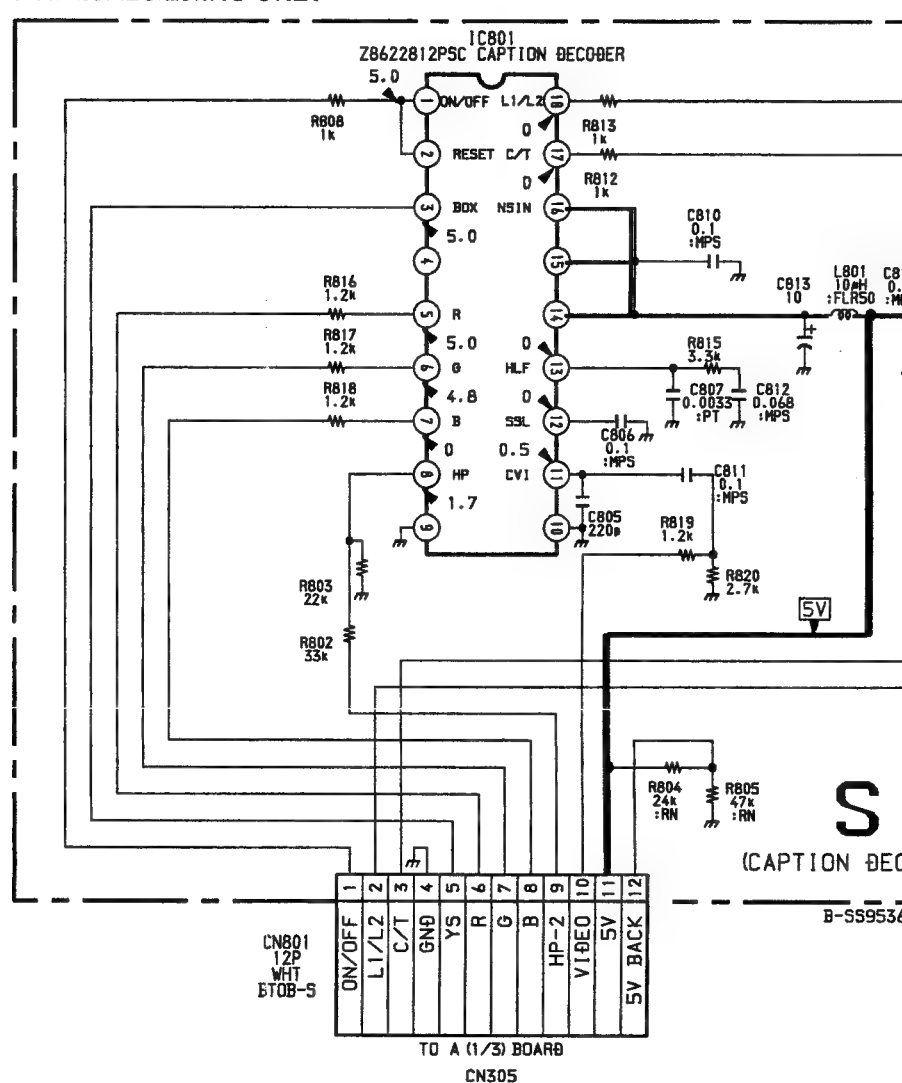




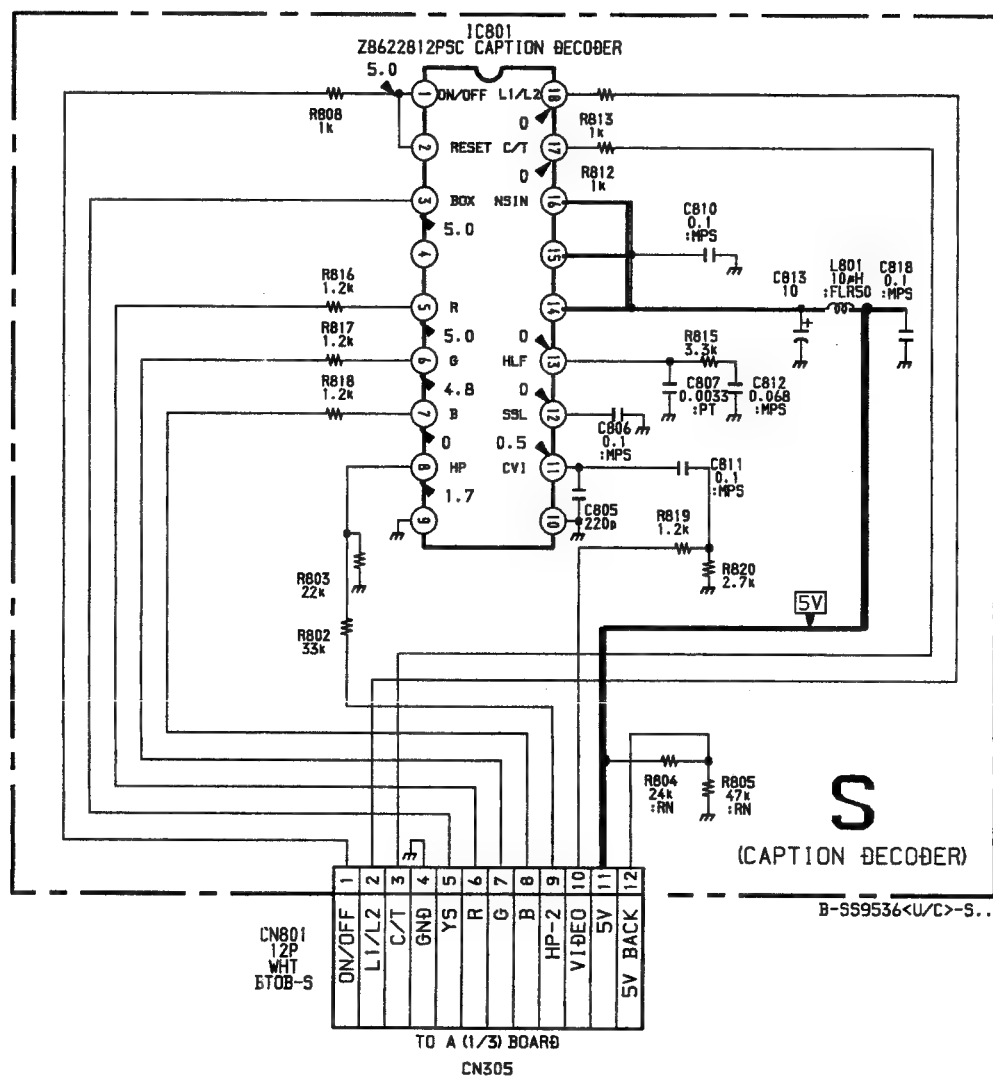
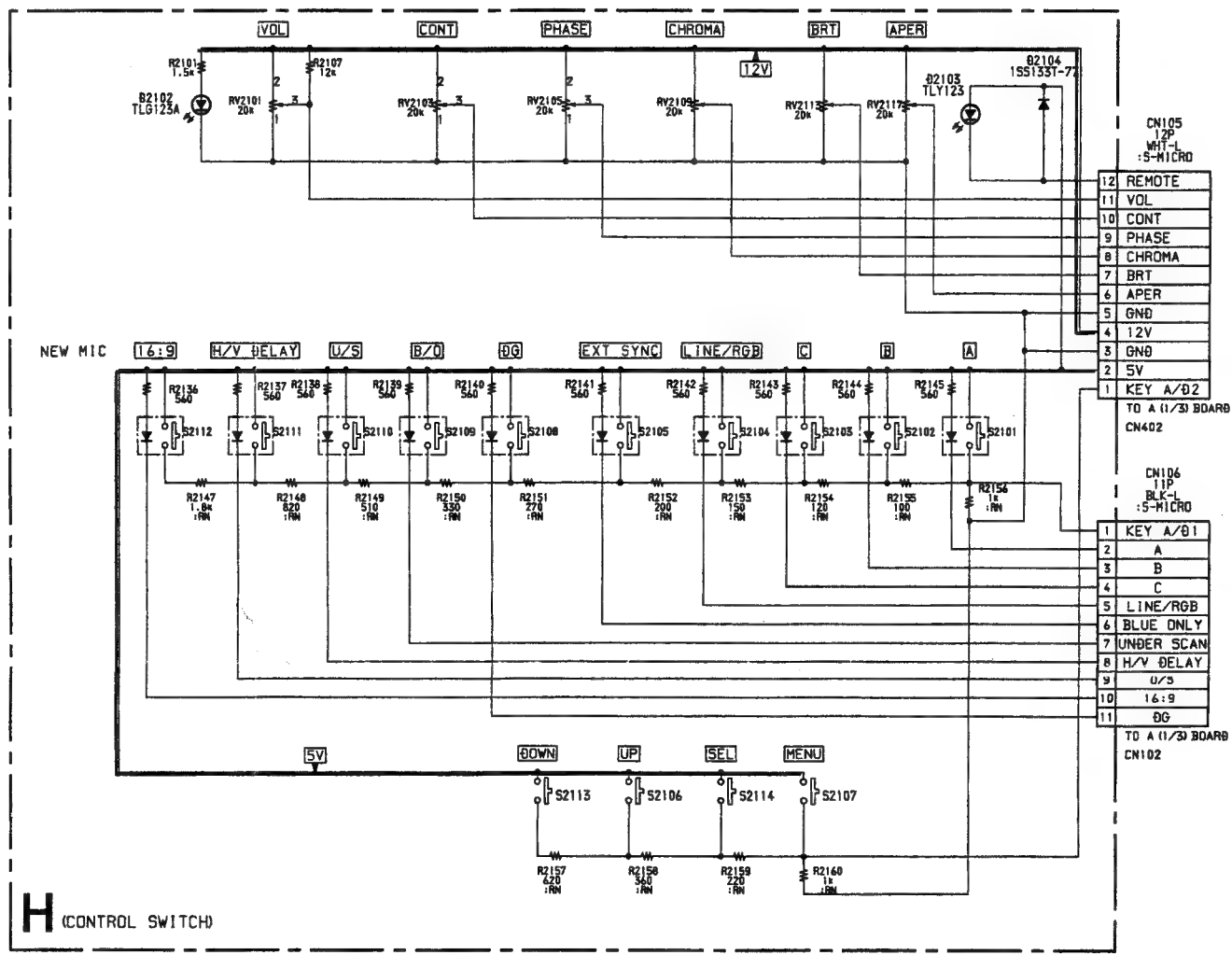
**TWO KINDS OF GROUND ON THIS BOARD, WHEN MEASURING THE VOLTAGES.**



**PVM-20M2U/20M4U ONLY**



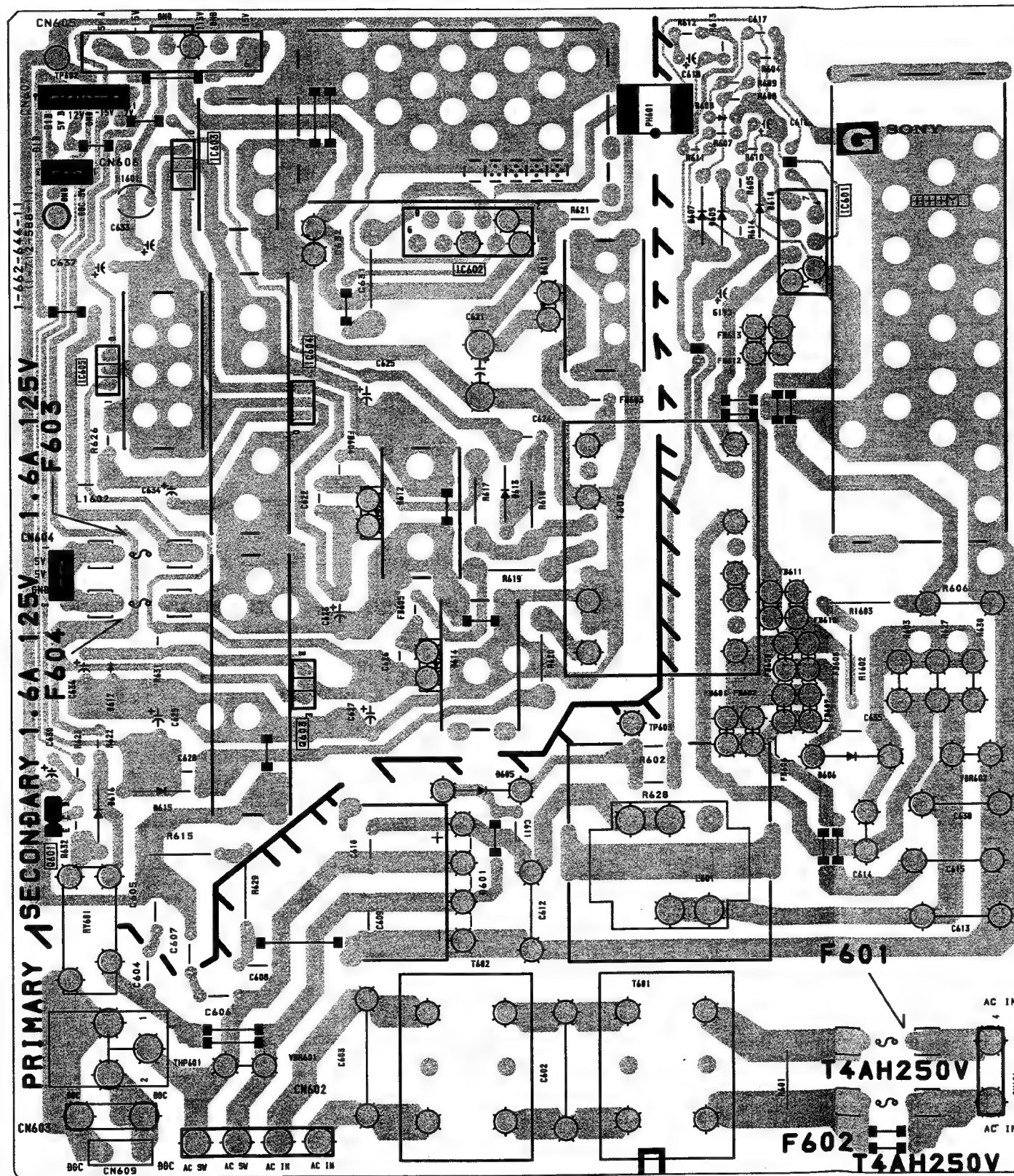








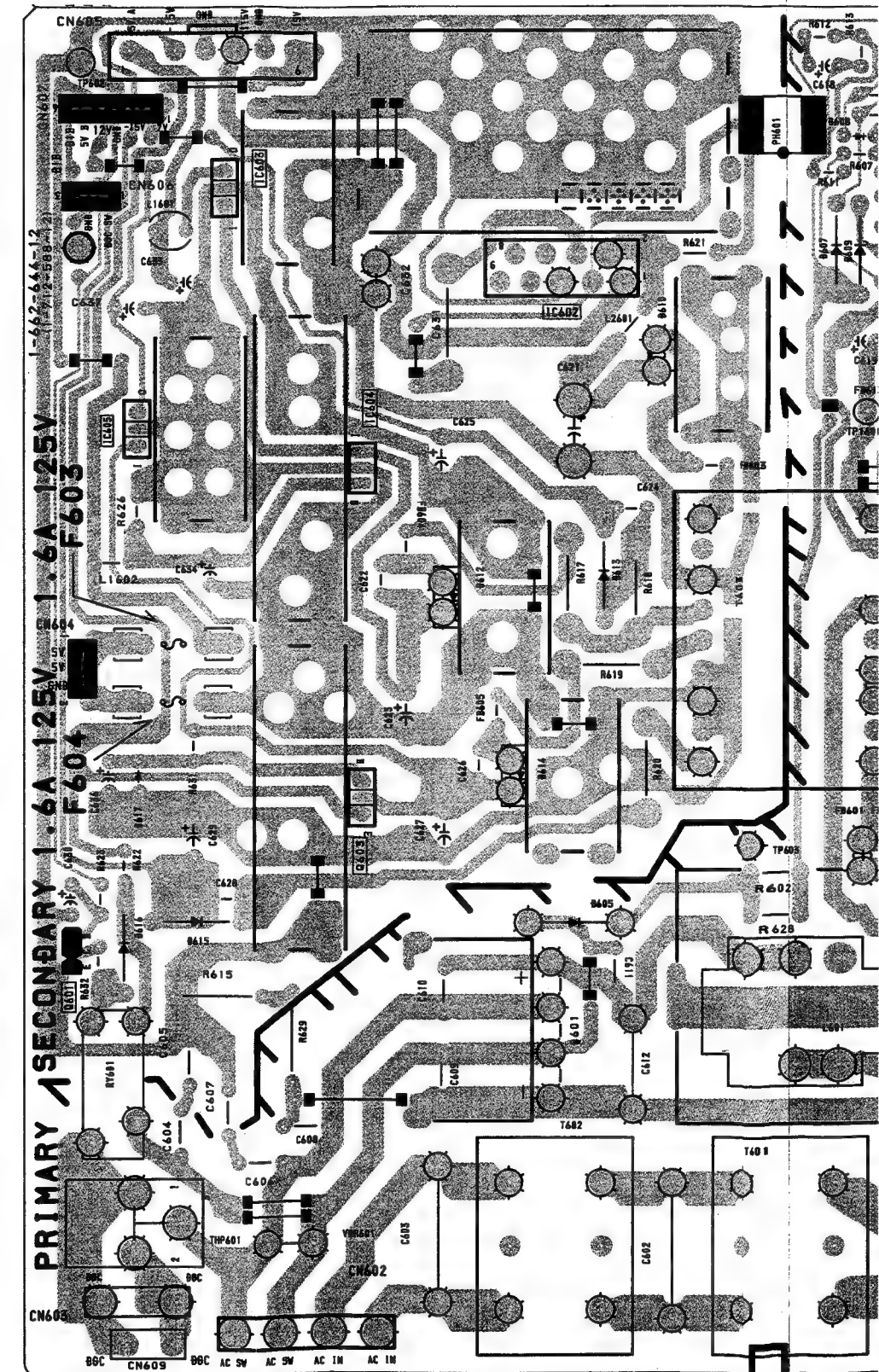
**-G BOARD-**



- 79 -

SONY-SP0402 / Druck 13

**-G BOARD-**



- 80 -



**H**

[CONTROL SWITCH]

**Q**

[VIDEO IN, VIDEO SW, Y/C-VIDEO IN/OUT,  
R.G.B SIGNAL INPUT, AUDIO IN, AUDIO SW]

**J**

[POWER SWITCH]

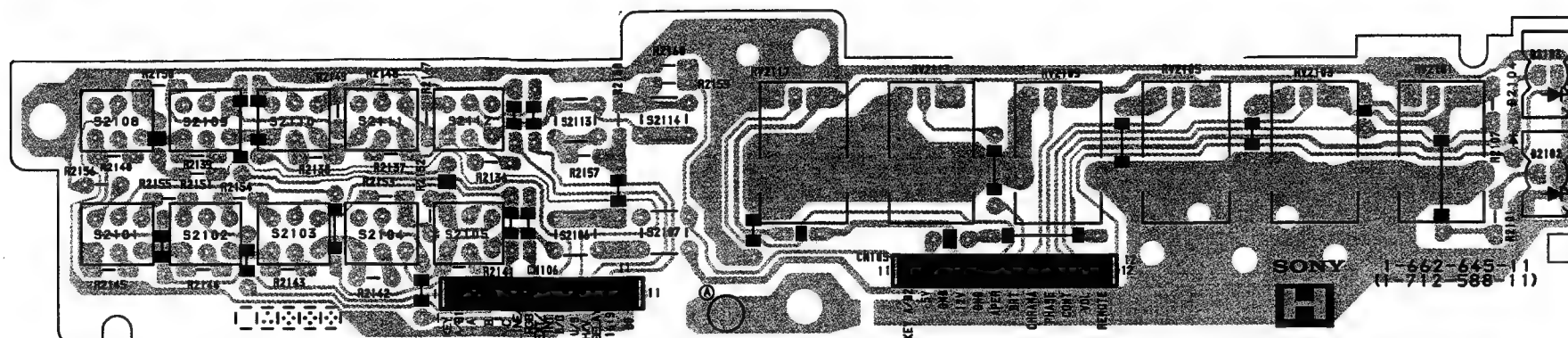
**S**

[CAPTION DECODER]

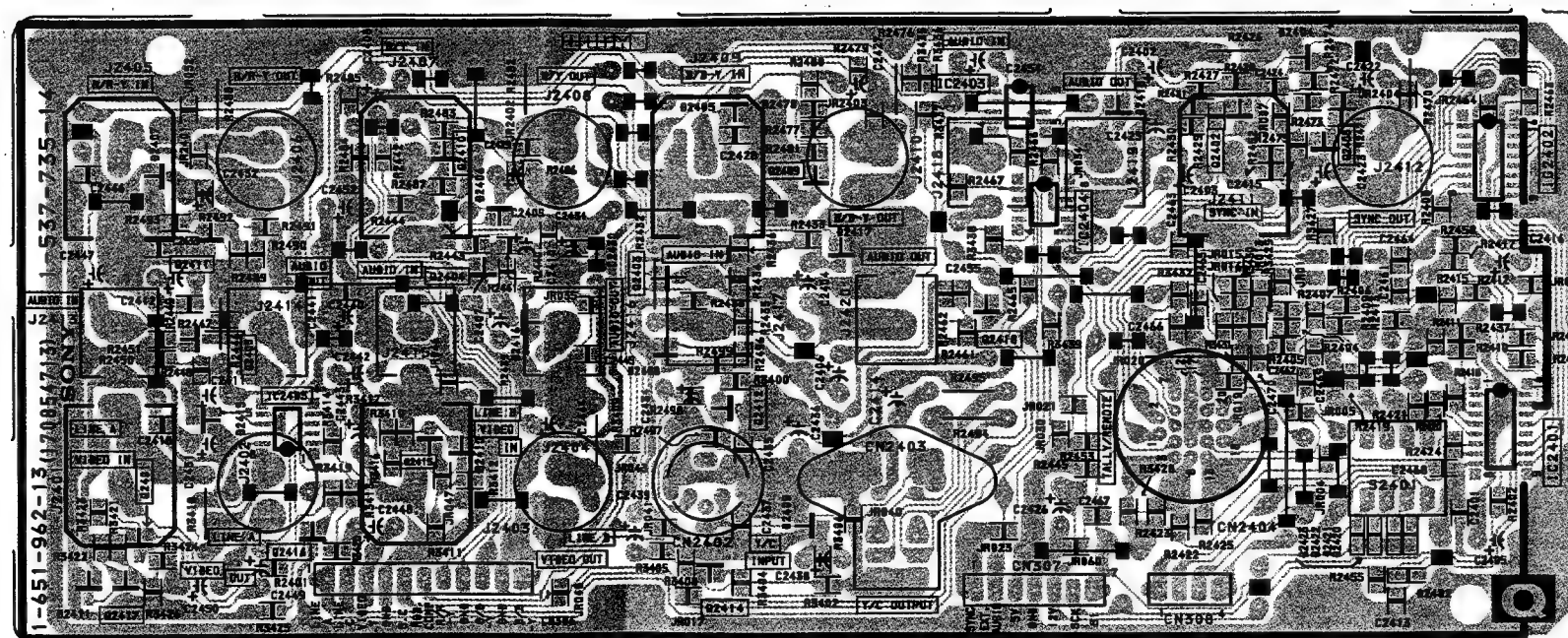
☒

[INDICATOR]

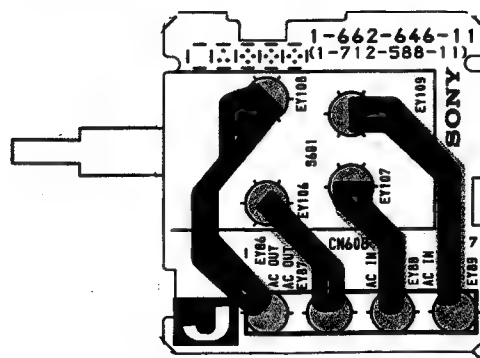
**-H BOARD-**



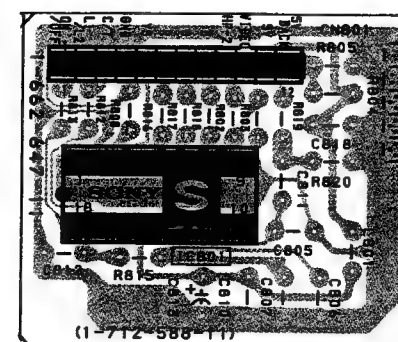
**—Q BOARD—**



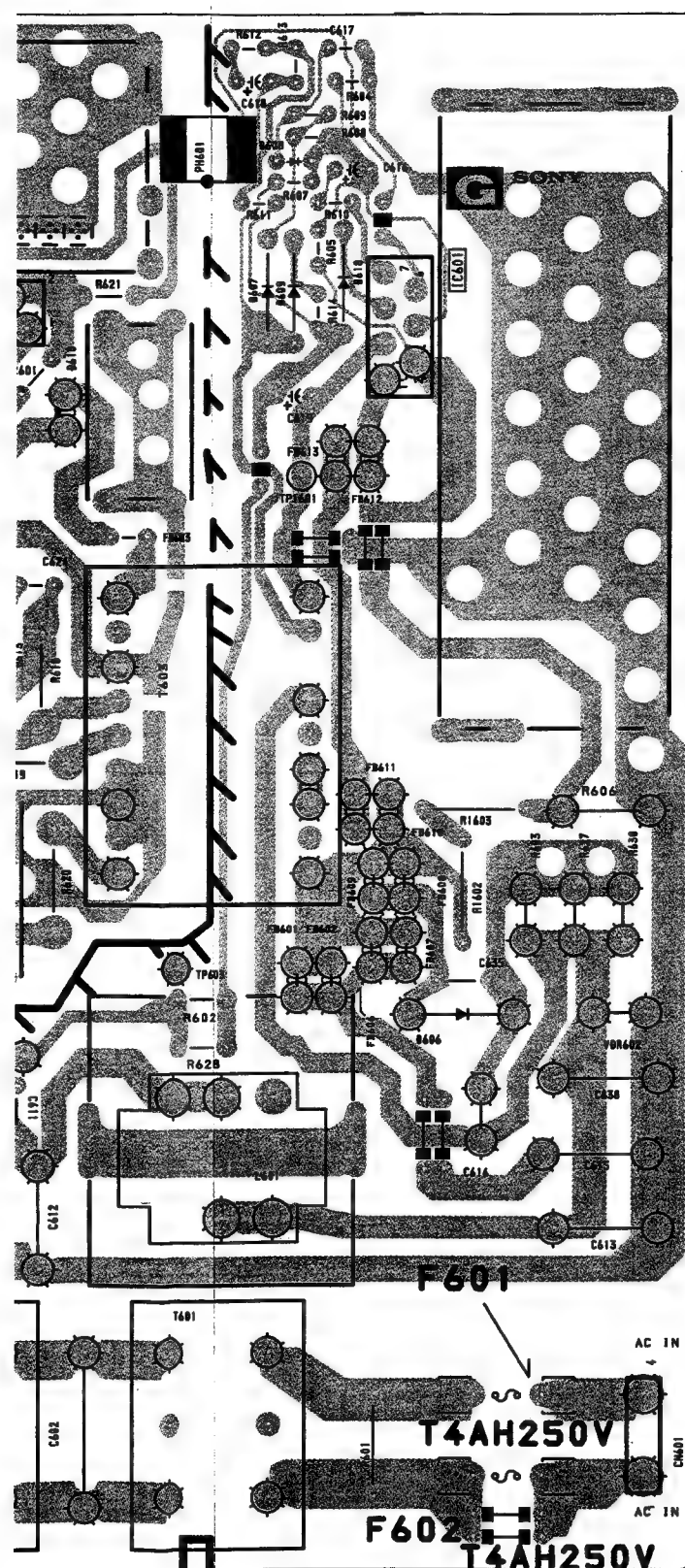
**-J BOARD-**



**—S BOARD—**  
**PVM-20M2U/20M4U ONLY**



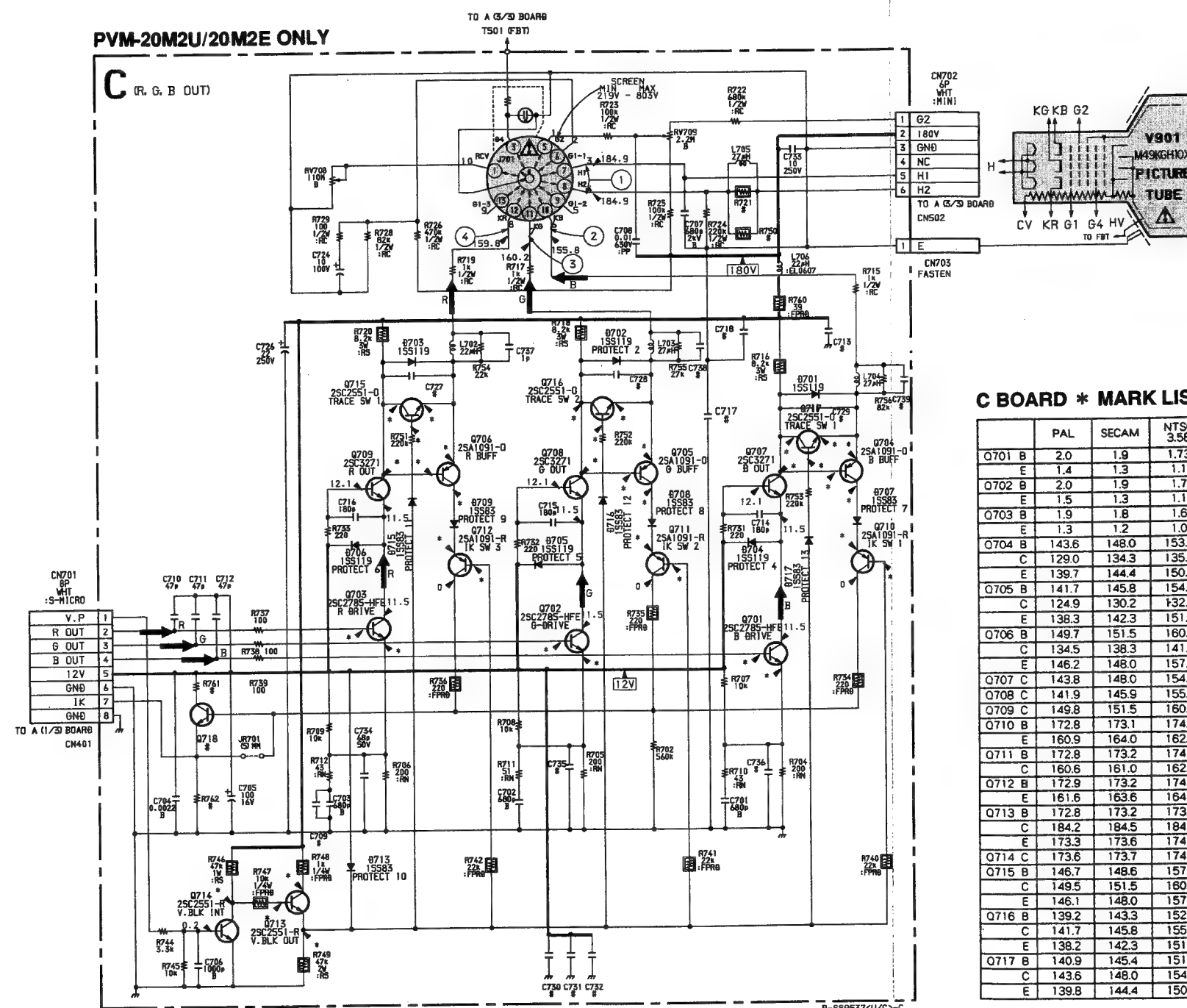
**-X BOARD-**





PVM-20M2U/20M2E ONLY

C (R, G, B OUT)

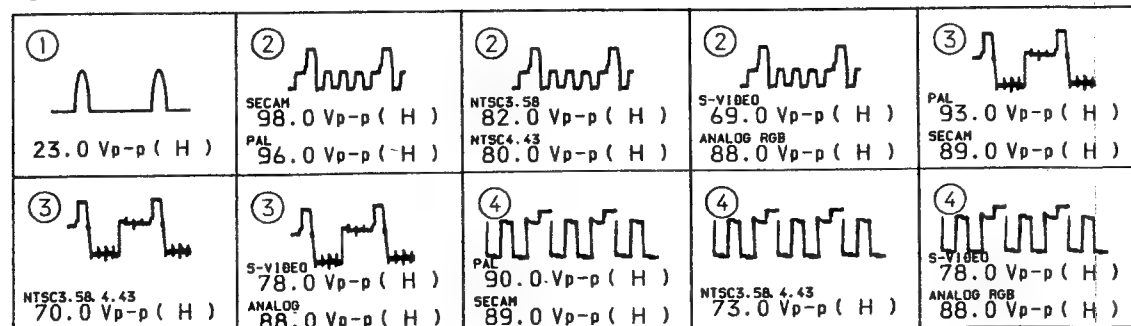


C BOARD \* MARK LIST

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
Q701 B	2.0	1.9	1.73	1.8	1.8	2.0
E	1.4	1.3	1.1	1.1	1.2	1.4
Q702 B	2.0	1.9	1.7	1.7	1.8	2.0
E	1.5	1.3	1.1	1.1	1.2	1.4
Q703 B	1.9	1.8	1.6	1.6	1.8	1.9
E	1.3	1.2	1.0	1.0	1.2	1.3
Q704 B	143.6	148.0	153.9	153.4	144.9	143.8
C	129.0	134.3	135.4	134.5	31.2	111.5
E	139.7	144.4	150.3	149.6	140.4	140.1
Q705 B	141.7	145.8	154.9	154.2	145.0	141.8
C	124.9	130.2	132.3	130.4	60.4	106.6
E	138.3	142.3	151.3	150.6	140.7	138.5
Q706 B	149.7	151.5	160.4	159.8	144.9	148.6
C	134.5	138.3	141.2	141.1	103.2	114.7
E	146.2	148.0	157.1	156.4	140.8	145.0
Q707 C	143.8	148.0	154.0	153.4	144.9	143.7
Q708 C	141.9	145.9	155.2	154.3	145.0	141.8
Q709 C	149.8	151.5	160.6	159.9	144.9	148.5
Q710 B	172.8	173.1	174.3	173.9	167.0	173.5
E	160.9	164.0	162.9	162.2	154.0	161.2
Q711 B	172.8	173.2	174.3	173.9	167.0	173.5
C	160.6	161.0	162.3	161.8	154.1	161.3
Q712 B	172.9	173.2	174.0	174.2	167.0	173.5
E	161.6	163.6	164.1	164.8	154.5	161.4
Q713 B	172.8	173.2	173.9	173.9	166.8	173.5
C	184.2	184.5	184.7	184.6	176.6	183.8
E	173.3	173.6	174.3	174.3	167.2	173.9
Q714 C	173.6	173.7	174.5	174.4	167.4	174.1
Q715 B	146.7	148.6	157.6	157.0	140.3	145.7
C	149.5	151.5	160.6	159.9	144.9	148.5
E	146.1	148.0	157.2	156.5	140.7	145.0
Q716 B	139.2	143.3	152.5	151.5	140.7	139.4
C	141.7	145.8	155.2	154.2	145.1	141.8
E	138.2	142.3	151.4	150.5	140.6	138.4
Q717 B	140.9	145.4	151.7	150.8	140.6	141.2
C	143.6	148.0	154.1	153.4	144.9	143.8
E	139.8	144.4	150.5	149.6	140.4	140.0

D701	PROTECT 1
D702	PROTECT 2
D703	PROTECT 3
D704	PROTECT 4
D705	PROTECT 5
D706	PROTECT 6
D707	PROTECT 7
D708	PROTECT 8
D709	PROTECT 9
D710	PROTECT 10
D711	PROTECT 11
D712	PROTECT 12
D713	PROTECT 13
Q701	B DRIVE
Q702	G DRIVE
Q703	R DRIVE
Q704	B BUFF
Q705	G BUFF
Q706	R BUFF
Q707	B OUT
Q708	G OUT
Q709	R OUT
Q710	IK SW 1
Q711	IK SW 2
Q712	IK SW 3
Q713	V. BLK OUT
Q714	V. BLK INT
Q715	TRACE SW 1
Q716	TRACE SW 2
Q717	TRACE SW 3

C BOARD WAVEFORMS

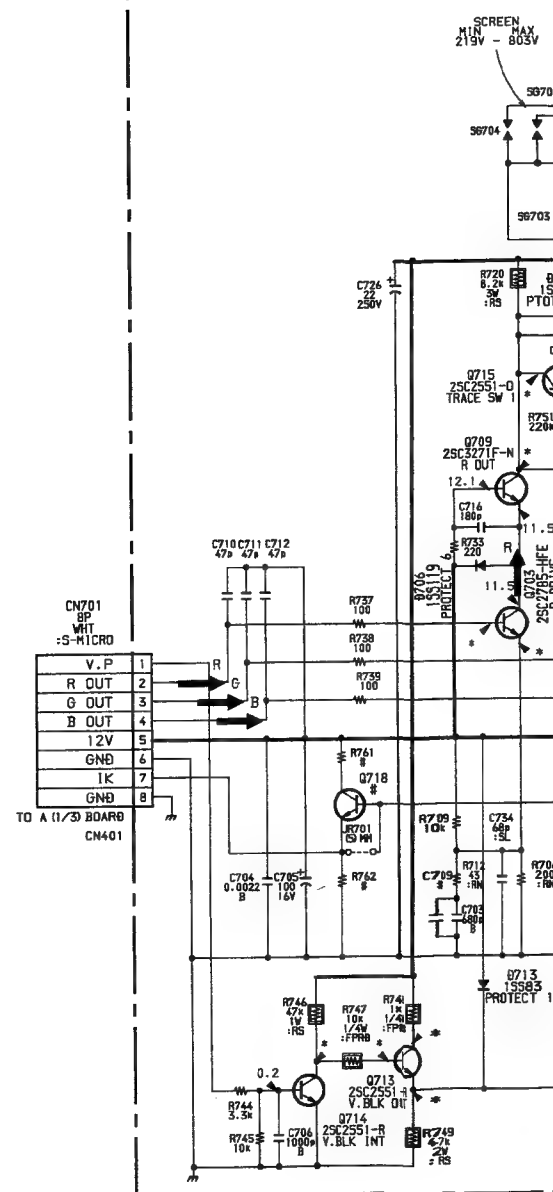


Schematic diagram

C board →

PVM-20M4U/20M4E/20M4A ONLY

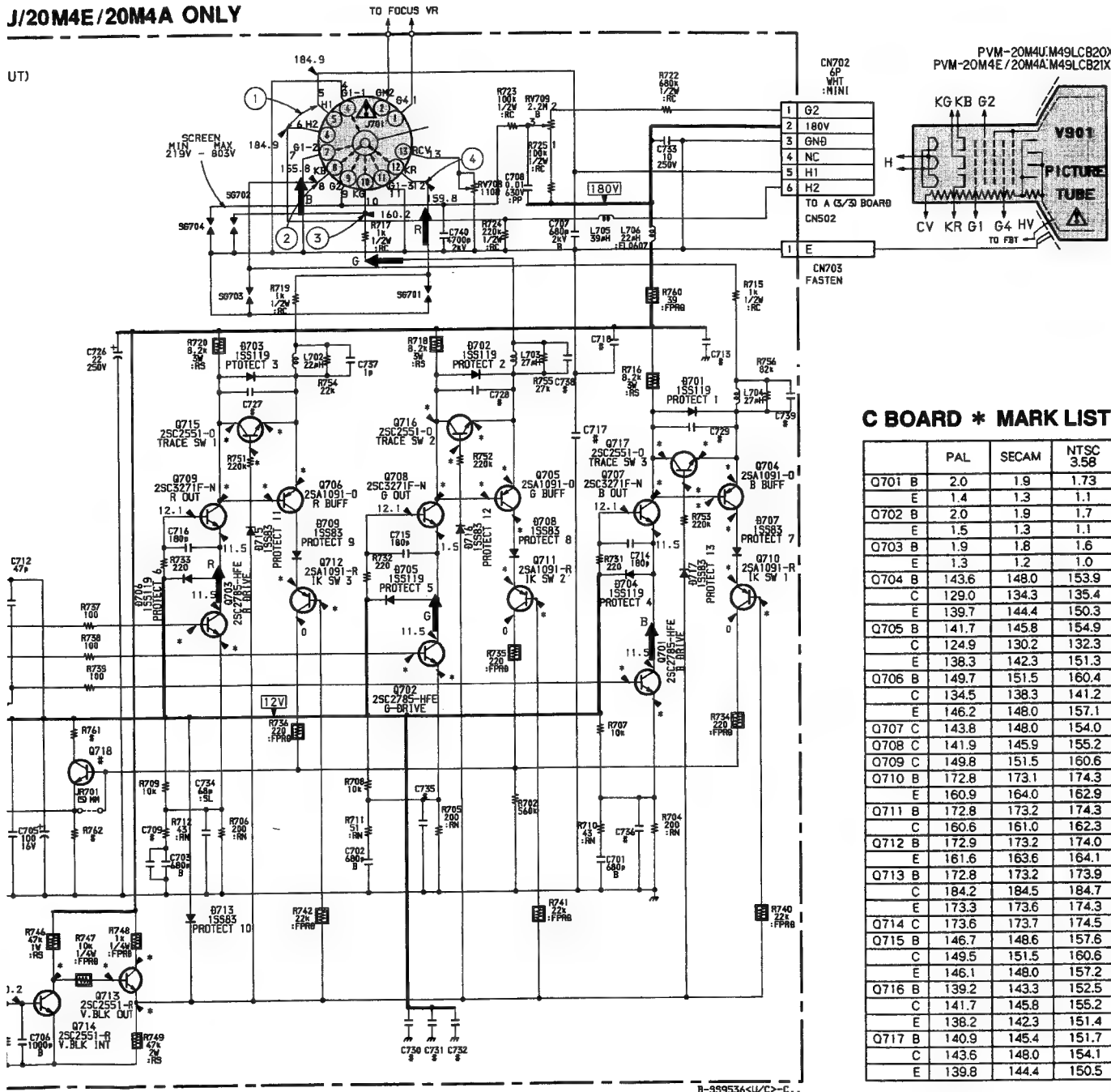
C (R, G, B OUT)





J/20M4E/20M4A ONLY

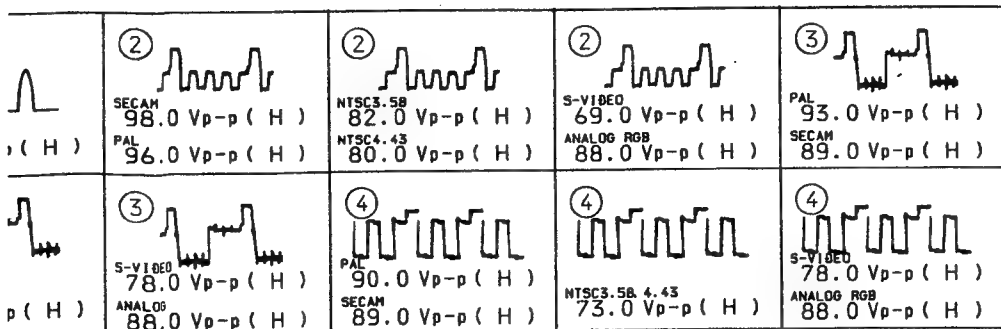
UT)



C BOARD \* MARK LIST

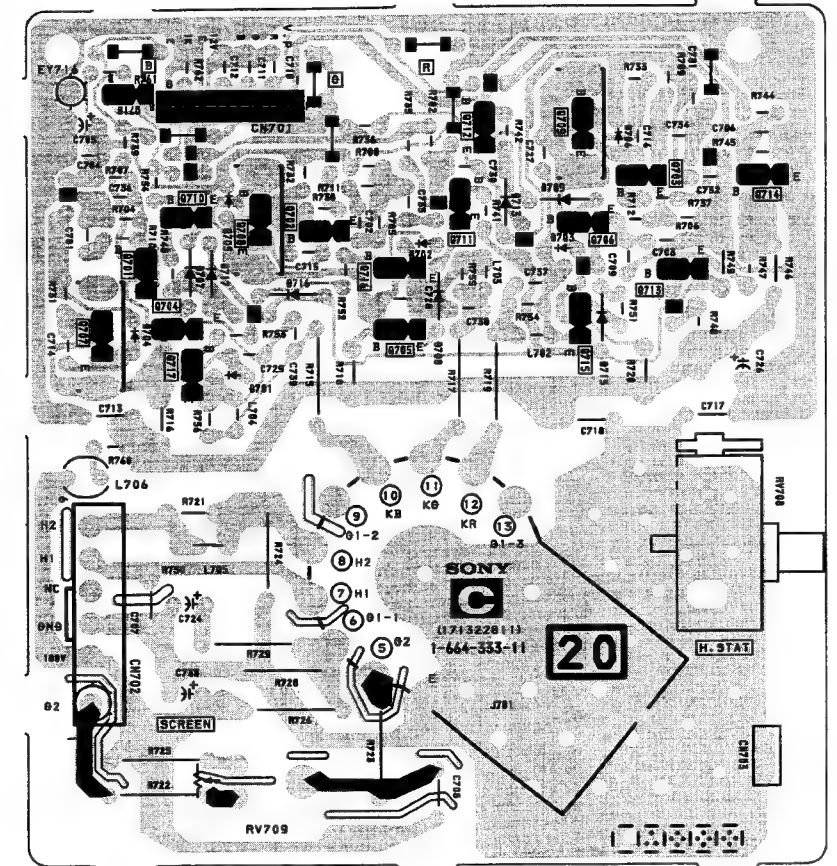
	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
Q701 B	2.0	1.9	1.73	1.8	1.8	2.0
E	1.4	1.3	1.1	1.1	1.2	1.4
Q702 B	2.0	1.9	1.7	1.7	1.8	2.0
E	1.5	1.3	1.1	1.1	1.2	1.4
Q703 B	1.9	1.8	1.6	1.6	1.8	1.9
E	1.3	1.2	1.0	1.0	1.2	1.3
Q704 B	143.6	148.0	153.9	153.4	144.9	143.8
C	129.0	134.3	135.4	134.5	31.2	111.5
E	139.7	144.4	150.3	149.6	140.4	140.1
Q705 B	141.7	145.8	154.9	154.2	145.0	141.8
C	124.9	130.2	132.3	130.4	60.4	106.6
E	138.3	142.3	151.3	150.6	140.7	138.5
Q706 B	149.7	151.5	160.4	159.8	144.9	148.6
C	134.5	138.3	141.2	141.1	103.2	114.7
E	146.2	148.0	157.1	156.4	140.8	145.0
Q707 C	143.8	148.0	154.0	153.4	144.9	143.7
Q708 C	141.9	145.9	155.2	154.3	145.0	141.8
Q709 C	149.8	151.5	160.6	159.9	144.9	148.5
Q710 B	172.8	173.1	174.3	173.9	167.0	173.5
E	160.9	164.0	162.9	162.2	154.0	161.2
Q711 B	172.8	173.2	174.3	173.9	167.0	173.5
C	160.6	161.0	162.3	161.8	154.1	161.3
Q712 B	172.9	173.2	174.0	174.2	167.0	173.5
E	161.6	163.6	164.1	164.8	154.5	161.4
Q713 B	172.8	173.2	173.9	173.9	166.8	173.5
C	184.2	184.5	184.7	184.6	176.6	183.8
E	173.3	173.6	174.3	174.3	167.2	173.9
Q714 C	173.6	173.7	174.5	174.4	167.4	174.1
Q715 B	146.7	148.6	157.6	157.0	140.3	145.7
C	149.5	151.5	160.6	159.9	144.9	148.5
E	146.1	148.0	157.2	156.5	140.7	145.0
Q716 B	139.2	143.3	152.5	151.5	140.7	139.4
C	141.7	145.8	155.2	154.2	145.1	141.8
E	138.2	142.3	151.4	150.5	140.6	138.4
Q717 B	140.9	145.4	151.7	150.8	140.6	141.2
C	143.6	148.0	154.1	153.4	144.9	143.8
E	139.8	144.4	150.5	149.6	140.4	140.0

WAVEFORMS

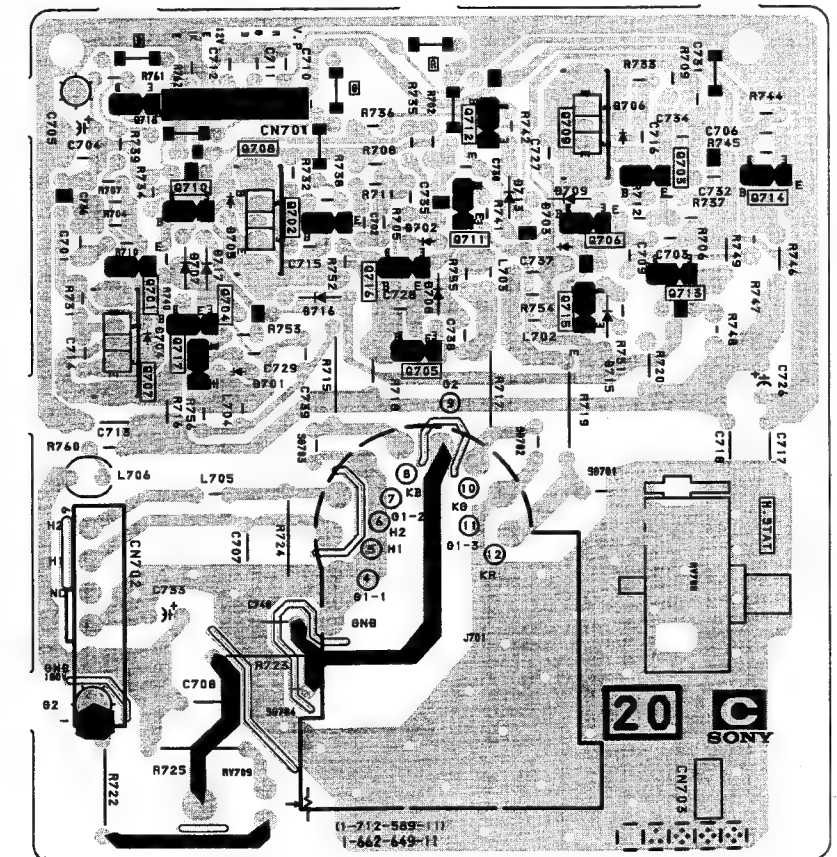


C [R.G.B OUT]

-C BOARD- PVM-20M2U/20M2E ONLY



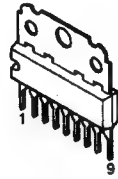
-C BOARD- PVM-20M4U/20M4E/20M4A ONLY



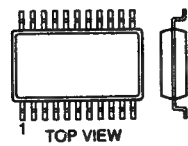


## 6-5. SEMICONDUCTORS

AN5265

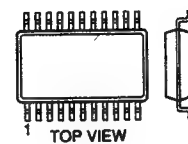


BA10324AF  
MC1402BF  
MC14066BF  
MC14584BF  
MC74HC86F



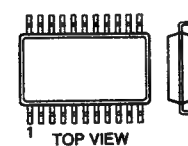
14pin SOP

BA7655AF-E2  
CXA1211M  
LM358D  
MM1111XF  
MM1113XFF  
NJM2245M  
ST24C02FM6TR  
XRA10393F  
XRA4558F-E2



8pin SOP

BU4053BCF



16pin SOP

CXA1214P



24pin DIP

CXA1739S



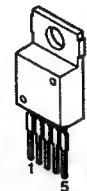
48pin DIP

H8D7249

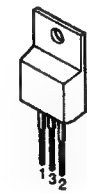


11pin SIP

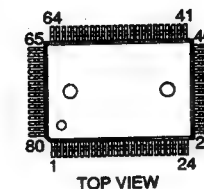
LA6500-FA  
MC14052BF  
MC14538BF



LM7912CT



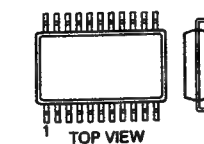
MC14094BF



M51279FP



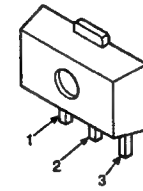
32pin DIP  
M62358FP-E1



24pin SOP  
NJM78M05FA  
TA7805S  
TA7812S



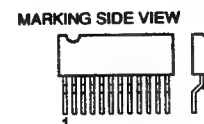
S-80743AL-A7-S



STR-M6524



STR-S3115



9pin ZIP

ST24C01FM6TR

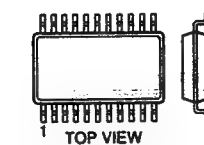


8pin DIP

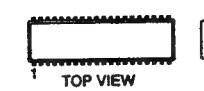
UPC1377C



22pin DIP  
UPD6451AGT-632-E2



20pin SOP  
UPD78P018FYCW-M01

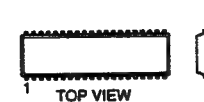


64pin DIP

XRA17812T

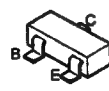


Z8622812PSC

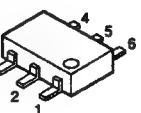


18pin DIP

DTA144EKA-T146  
DTC124EKA-T146  
DTC144EKA-T146  
2SA1162-G  
2SB709A-R  
2SC1623-L5L6  
2SD601A-S



1MT1US



1MX1



1RF520



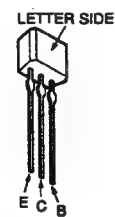
2SA1091-0  
2SC2551-0



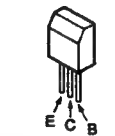
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2SA1407-D  
2SC2611  
2SC2688-LK  
2SC2690A-Q



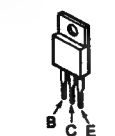
2SC2785-HFE



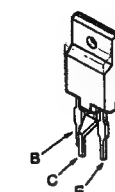
2SC2958  
2SD774-34



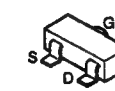
2SC3851-G  
2SC4686A (LBSONY)  
2SD1133  
2SD1134  
2SD2396K



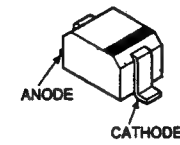
2SD1878-CA



2SK94  
2SK94-X2X3X4



DTZ11B  
DTZ13C  
DTZ5.6B  
DTZ6.2  
MA111



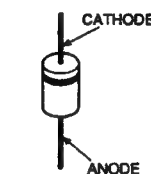
D4SB60L



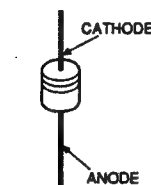
D5L60  
FML-G12S



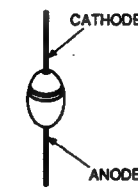
EGP20G  
EL1Z  
ERD07-15  
RGP02-17EL-6433  
RGP15K-6179  
UF5406  
10E2  
1S2076  
1SS83



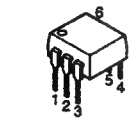
ERA15-08  
RD16ES-B1  
RD16ES-B3  
1SS119-25  
1SS133T-77



ERC38-06  
V11N



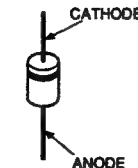
PC111YS



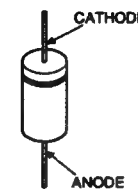
RD10SB1



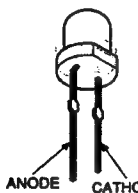
RH-1A



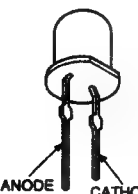
RU-3AM



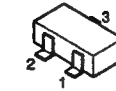
SEL3810DLC05



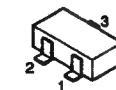
SLP281C-50  
TLY123



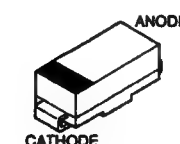
1SS184



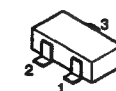
1SS226



1SV230TPH3  
1SV232-TPH3



1S2836





## SECTION 7 EXPLODED VIEWS

### NOTE:

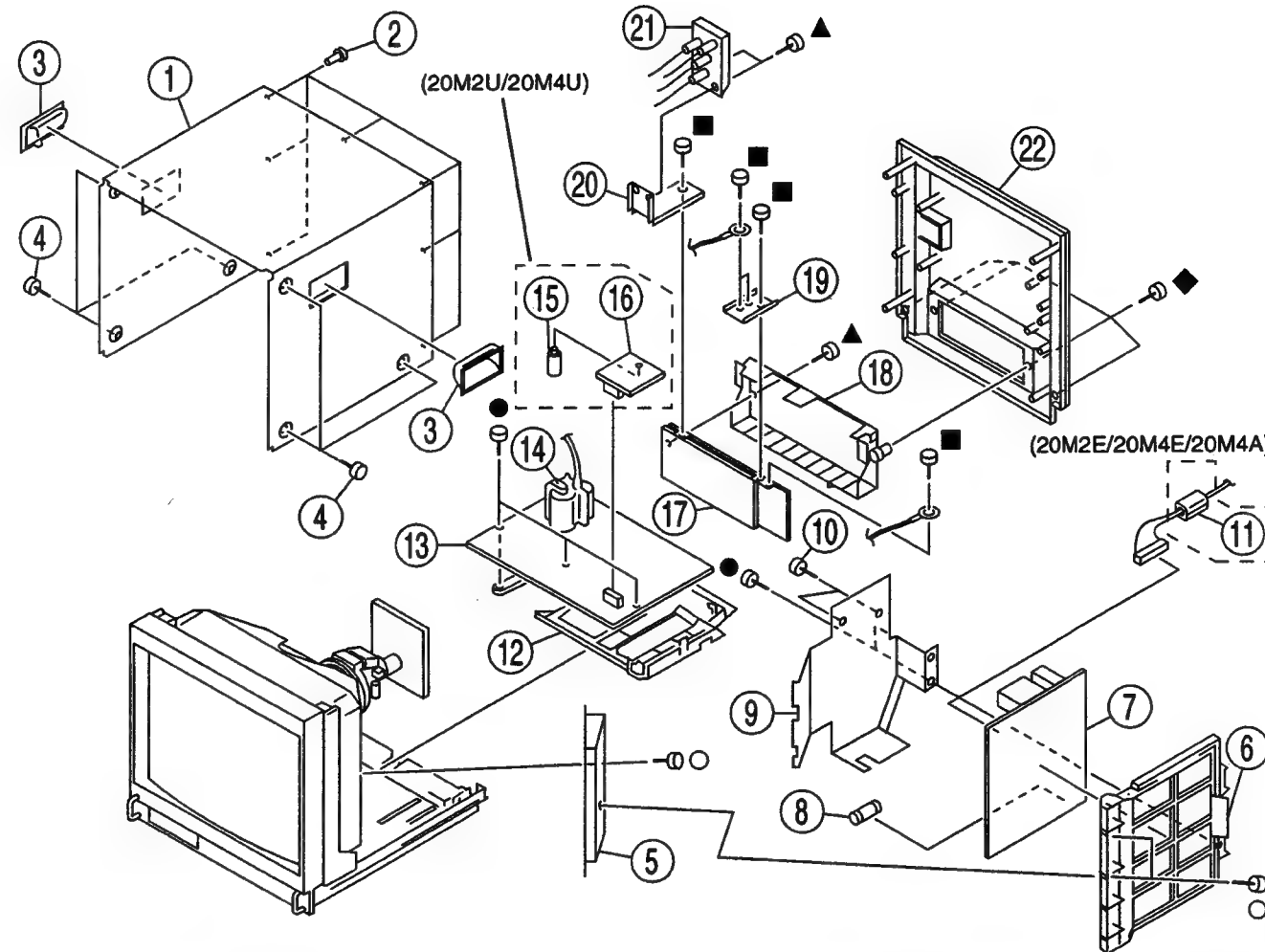
• Items with no part number and no description are not stocked because they are seldom required for routine service.

• The construction parts of an assembled part are indicated with a collation number in the remark column.

• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### 7-1. CHASSIS

- : 7-685-648-79 +BVTP 3X12
- : 7-682-661-01 +PS 4X8
- ▲ : 7-685-646-79 +BVTP 3X8
- ◆ : 7-685-663-79 +BVTP 4X16
- : 7-685-881-09 +BVTP 4X8



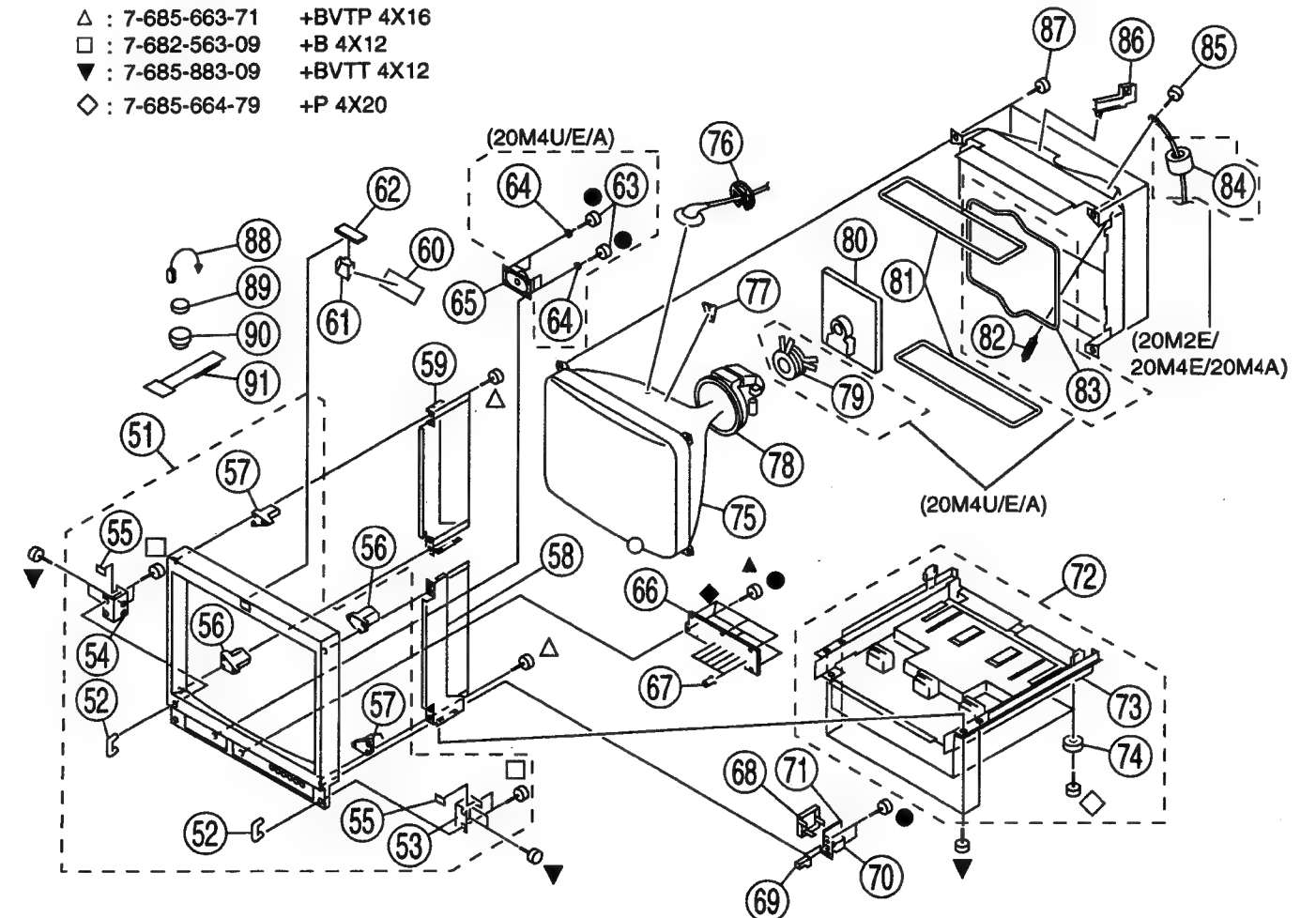
REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	4-057-973-11	COVER, TOP		13	* A-1298-003-A	A BOARD, COMPLETE (20M4U/E/A)	
2	4-391-825-01	RIVET, NYLON			* A-1298-005-A	A BOARD, COMPLETE (20M2U/E)	
3	4-043-825-01	HANDLE		14	Δ 1-453-234-11	TRANSFORMER ASSY, FLYBACK	
4	4-847-802-11	SCREW (OS), CASE, CLAW		15	* 3-687-542-41	SPACER, PC BOARD SPACE (20M2U/20M4U)	
5	X-4391-825-1	HOOK ASSY, F		16	* A-1390-705-A	S BOARD, COMPLETE (20M2U/20M4U)	
6	* 4-043-689-01	BRACKET, G		17	1-537-735-14	TERMINAL BOARD ASSY, I/O (A) (Q BOARD)	
7	* A-1316-302-A	G BOARD, COMPLETE		18	4-043-688-01	PANEL, CONNECTOR	
8	Δ 1-576-231-11	FUSE (H.B.C.) 4A/250V		19	* 4-058-363-01	TERMINAL, EARTH	
9	* 4-057-974-01	SHIELD, G PC BOARD		20	4-057-971-01	BRACKET, FOCUS VOLUME	
10	4-382-854-11	SCREW (M3X10), P.SW (+)		21	Δ 1-223-417-12	RESISTOR ASSY (HIGH-VOLTAGE)	(20M4U/E/A)
11	1-543-653-11	CORE ASSY, BEAD (DIVISION TYPE)	(20M2E/20M4E/20M4A)		Δ 1-238-368-11	RESISTOR ASSY HIGH-VOLTAGE (20M2U/E)	
12	* 4-043-690-01	BRACKET, MAIN		22	4-043-677-11	COVER, REAR	

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 7-2. PICTURE TUBE

- : 7-685-648-79 +BVTP 3X12
- Δ : 7-685-663-71 +BVTP 4X16
- : 7-682-563-09 +B 4X12
- ▼ : 7-685-883-09 +BVTT 4X12
- ◇ : 7-685-664-79 +P 4X20



The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-4034-348-1	BEZEL ASSY (20M2U/E)	52-57	74	4-901-947-01	LEG	
	X-4034-352-1	BEZEL ASSY (20M4U/E/A)	52-57	75	Δ 8-736-135-05	PICTURE TUBE 20FZ5 (DARK) (20M2U/E)	
52	4-052-200-01	HANDLE, PROTECTOR			Δ 8-736-379-05	PICTURE TUBE 20MT1 (PVM) (20M4E/A)	
53	* 4-043-670-01	REINFORCEMENT (R), HANDLE			Δ 8-736-381-05	PICTURE TUBE 20MT3 (PVM) (20M4U)	
54	* 4-043-669-01	REINFORCEMENT (L), HANDLE		76	3-704-372-01	HOLDER, HV CABLE	
55	* 4-043-797-01	PLATE, BLIND		77	3-703-961-01	SPACER, DY	
56	* 4-043-672-01	BRACKET (A), PICTURE TUBE		78	Δ 1-451-349-11	DEFLECTION YOKE (Y20FZA) (20M2U/E)	
57	* 4-043-673-01	BRACKET (B), PICTURE TUBE			Δ 1-451-456-11	DEFLECTION YOKE (Y20MTA) (20M4U/E/A)	
58	* A-1450-186-A	BRACKET ASSY (R), SIDE		79	Δ 8-453-003-41	NA3012-M4 (20M4U/E/A)	
59	* A-1450-185-A	BRACKET ASSY (L), SIDE		80	* A-1331-630-A	C BOARD, COMPLETE (20M2U/E)	
60	4-044-606-01	CUSHION, TALLY			* A-1331-628-A	C BOARD, COMPLETE (20M4U/E/A)	
61	* 4-043-671-01	REFLECTOR, LED		81	Δ 1-426-505-11	COIL, DEMAGNETIZATION	
62	* A-1390-704-A	X BOARD, COMPLETE		82	* 4-303-774-99	SPRING (20M4U/E/A)	
63	4-379-192-01	SCREW, TAPPING, STEP (20M4U/E/A)		83	Δ 1-411-657-11	COIL, LANDING CORRECTION (20M4U/E/A)	
64	* 4-379-189-01	CUSHION, SPEAKER (20M4U/E/A)		84	1-543-827-11	CLAMP, SLEEVE FERRITE	(20M2E/20M4E/20M4A)
65	1-544-063-12	SPEAKER		85	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
66	* A-1372-302-A	H BOARD, COMPLETE		86	* 4-387-284-01	HOLDER, LEAD	
67	4-043-802-02	KNOB, CONTROL		87	4-365-808-01	SCREW (5), TAPPING	
68	4-043-681-01	COVER, AC SWITCH		88	4-308-870-00	CLIP, LEAD WIRE	
69	4-043-683-01	BUTTON, POWER SWITCH		89	1-452-032-00	MAGNET, DISK ; 10mmφ	
70	Δ 1-692-921-11	SWITCH, PUSH (A.C. POWER)		90	1-452-094-00	MAGNET, ROTATABLE DISK ; 15mmφ	
71	* A-1388-193-A	J BOARD, COMPLETE	73,74	91	4-051-736-21	PIECE A(90), CONV. CORRECT	
72	* X-4032-770-1	CABINET ASSY, BOTTOM					
73	* X-4031-740-1	CABINET, BOTTOM					



## SECTION 8

### ELECTRICAL PARTS LIST

A

**NOTE:**

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

• The components identified by  $\Delta$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

**RESISTORS**

- All resistors are in ohms
- F : nonflammable

**CAPACITORS**  
PF :  $\mu\mu$  F

• There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1298-003-A	A BOARD, COMPLETE (PVM-20M4U/E/A) *****			C200	1-126-963-11	ELECT 4.7MF 20%	50V
* A-1298-005-A	A BOARD, COMPLETE (PVM-20M2U/E) *****			C201	1-137-353-11	MYLAR 0.047MF 10%	100V
1-540-044-11	SOCKET, IC (20M4U/E/A)			C202	1-163-017-00	CERAMIC CHIP 0.0047MF 10%	50V
* 4-043-994-01	PLATE (CF), SHIELD			C203	1-126-963-11	ELECT 4.7MF 20%	50V
4-382-854-11	SCREW (M3X10), P, SW (+)			C204	1-126-964-11	ELECT 10MF 20%	50V
7-682-948-01	SCREW +PSW 3X8			C205	1-126-767-11	ELECT 1000MF 20%	16V
	<BAND PASS FILTER>			C206	1-128-526-11	ELECT 100MF 20%	25V
BPF400	1-236-363-11	FILTER, BAND PASS		C207	1-104-665-11	ELECT 100MF 20%	25V
	<CAPACITOR>			C208	1-126-964-11	ELECT 10MF 20%	50V
C105	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C209	1-126-963-11	ELECT 4.7MF 20%	50V
C106	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C300	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C114	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C301	1-163-086-00	CERAMIC CHIP 3PF	0.25PF 50V
C115	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C302	1-163-086-00	CERAMIC CHIP 3PF	0.25PF 50V
C116	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C304	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C117	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C305	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C118	1-163-259-91	CERAMIC CHIP 220PF 5%	50V	C306	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C119	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C309	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C121	1-163-237-11	CERAMIC CHIP 27PF 5%	50V	C310	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C123	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C311	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C124	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C312	1-126-961-11	ELECT 2.2MF 20%	50V
C132	1-163-141-00	CERAMIC CHIP 0.001MF 5%	50V	C313	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C133	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C314	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
C134	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C315	1-126-964-11	ELECT 10MF 20%	50V
C135	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C316	1-104-664-11	ELECT 47MF	20% 25V
C136	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C317	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C140	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V	C318	1-126-964-11	ELECT 10MF 20%	50V
C141	1-164-161-11	CERAMIC CHIP 0.0022MF 10%	50V	C319	1-163-222-11	CERAMIC CHIP 5PF	0.25PF 50V
C142	1-163-259-91	CERAMIC CHIP 220PF 5%	50V	C320	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C143	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C322	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C144	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C323	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C145	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C324	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C154	1-163-037-11	CERAMIC CHIP 0.022MF 10%	50V	C325	1-126-964-11	ELECT 10MF	20% 50V
C155	1-163-023-00	CERAMIC CHIP 0.015MF 10%	50V	C326	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C156	1-163-019-00	CERAMIC CHIP 0.0068MF 10%	50V	C327	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C157	1-163-019-00	CERAMIC CHIP 0.0068MF 10%	50V	C328	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C158	1-163-809-11	CERAMIC CHIP 0.047MF 10%	25V	C329	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C159	1-164-344-11	CERAMIC CHIP 0.068MF 10%	25V	C330	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C161	1-104-664-11	ELECT 47MF 20%	25V	C331	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C162	1-163-141-00	CERAMIC CHIP 0.001MF 5%	50V	C332	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C164	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C333	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C165	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C334	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C166	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V	C335	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C167	1-126-925-11	ELECT 470MF 20%	10V	C336	1-104-664-11	ELECT 47MF	20% 25V
C168	1-126-925-11	ELECT 470MF 20%	10V	C337	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C169	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C338	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C171	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C339	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C174	1-163-243-11	CERAMIC CHIP 47PF 5%	50V	C340	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C341	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
				C342	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V
				C343	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C344	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C345	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C346	1-126-960-11	ELECT 1MF	20% 50V
				C347	1-163-243-11	CERAMIC CHIP 47PF	5% 50V





REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C348	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C421	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C349	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C422	1-126-960-11	ELECT 1MF	20% 50V
C350	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C423	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C351	1-104-664-11	ELECT 47MF	20% 25V	C424	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C352	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C426	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C353	1-165-319-11	CERAMIC CHIP 0.1MF	50V	C427	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C354	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C428	1-104-661-91	ELECT 330MF	20% 16V
C355	1-126-960-11	ELECT 1MF	20% 50V	C429	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C356	1-126-963-11	ELECT 4.7MF	20% 50V	C430	1-104-661-91	ELECT 330MF	20% 16V
C357	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C431	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C358	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C432	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C359	1-104-664-11	ELECT 47MF	20% 25V	C433	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C360	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C434	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C361	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C435	1-163-089-00	CERAMIC CHIP 6PF	0.25PF 50V
C362	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C436	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C363	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C437	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C364	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C438	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C365	1-106-343-00	MYLAR 0.001MF	10% 100V	C439	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C366	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C440	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C367	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C441	1-126-962-11	ELECT 3.3MF	20% 50V
C368	1-124-261-00	ELECT 10MF	20% 50V	C442	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C369	1-164-298-11	CERAMIC CHIP 0.15MF	10% 25V	C443	1-163-107-00	CERAMIC CHIP 39PF	5% 50V
C370	1-104-664-11	ELECT 47MF	20% 25V	C444	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C371	1-104-664-11	ELECT 47MF	20% 25V	C445	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C372	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C446	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C373	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C447	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C374	1-126-960-11	ELECT 1MF	20% 50V	C448	1-163-107-00	CERAMIC CHIP 39PF	5% 50V
C375	1-163-259-91	CERAMIC CHIP 220PF	5% 50V	C449	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C376	1-126-959-11	ELECT 0.47MF	20% 50V	C450	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C377	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C451	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C378	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C452	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C379	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C453	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C380	1-126-767-11	ELECT 1000MF	20% 16V	C454	1-163-107-00	CERAMIC CHIP 39PF	5% 50V
C381	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C455	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C382	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C456	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C383	1-104-664-11	ELECT 47MF	20% 25V	C457	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C384	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	C458	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
C385	1-104-664-11	ELECT 47MF	20% 25V	C459	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C386	1-124-261-00	ELECT 10MF	20% 50V	C460	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C387	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C461	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C388	1-124-261-00	ELECT 10MF	20% 50V	C462	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C389	1-104-664-11	ELECT 47MF	20% 25V	C463	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C390	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C464	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C391	1-104-664-11	ELECT 47MF	20% 25V	C465	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C392	1-164-298-11	CERAMIC CHIP 0.15MF	10% 25V	C466	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C393	1-164-298-11	CERAMIC CHIP 0.15MF	10% 25V	C467	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C394	1-104-664-11	ELECT 47MF	20% 25V	C469	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V
C395	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	C470	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C396	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V	C471	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C397	1-104-664-11	ELECT 47MF	20% 25V	C472	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C398	1-104-664-11	ELECT 47MF	20% 25V	C473	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C399	1-104-664-11	ELECT 47MF	20% 25V	C475	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C400	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C476	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C401	1-164-346-11	CERAMIC CHIP 1MF	16V	C477	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C402	1-126-967-11	ELECT 47MF	20% 50V	C478	1-126-964-11	ELECT 10MF	20% 50V
C403	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C479	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C406	1-126-965-11	ELECT 22MF	20% 50V	C482	1-126-925-11	ELECT 470MF	20% 10V
C407	1-104-664-11	ELECT 47MF	20% 25V	C483	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
C408	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C484	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C409	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C485	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C410	1-126-965-11	ELECT 22MF	20% 50V	C486	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
C411	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C487	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C414	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C490	1-164-336-11	CERAMIC CHIP 0.33MF	25V
C415	1-126-964-11	ELECT 10MF	20% 50V	C491	1-164-336-11	CERAMIC CHIP 0.33MF	25V
C416	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C492	1-164-336-11	CERAMIC CHIP 0.33MF	25V
C417	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C493	1-104-760-11	CERAMIC CHIP 0.047MF	10% 50V
C418	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C494	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C419	1-126-925-11	ELECT 470MF	20% 10V	C495	1-126-964-11	ELECT 10MF	20% 50V
C420	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C496	1-163-249-11	CERAMIC CHIP 82PF	5% 50V



The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C497	1-163-011-11	CERAMIC CHIP 0.0015MF 10%	50V	C572	1-104-709-11	ELECT 4.7MF 0	160V
C498	1-126-961-11	ELECT 2.2MF 20%	50V	C573	1-136-177-00	FILM 1MF 5%	50V
C499	1-163-031-11	CERAMIC CHIP 0.01MF 50V		C575	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C500	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V	C576	1-102-244-00	CERAMIC 220PF 10%	500V
C501	1-164-182-11	CERAMIC CHIP 0.0033MF 10%	50V	C577	1-107-906-11	ELECT 10MF 20%	50V
C502	1-163-141-00	CERAMIC CHIP 0.001MF 5%	50V	C578	1-136-111-00	FILM 1MF 5%	200V
C503	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C579	1-107-910-11	ELECT 100MF 20%	50V
C504	1-136-495-11	FILM 0.068MF 5%	50V	C580	1-136-105-00	FILM 0.33MF 5%	200V
C505	1-163-199-00	CERAMIC CHIP 560PF 5%	50V	C581	1-126-963-11	ELECT 4.7MF 20%	50V
C506	1-126-959-11	ELECT 0.47MF 20%	50V	C582	1-102-002-00	CERAMIC 680PF 10%	500V
C507	1-128-526-11	ELECT 100MF 20%	25V	C583	1-136-541-11	FILM 1.5MF 5%	200V
C508	1-130-497-00	MYLAR 0.15MF 5%	50V	C584	1-107-949-11	ELECT 2.2MF 20%	160V
C509	1-128-566-11	ELECT 470MF 20%	100V	C585	1-107-960-11	ELECT 4.7MF 20%	250V
C511	1-107-368-11	FILM 0.047MF 10%	200V	C586	1-126-942-61	ELECT 1000MF 20%	25V
C512	1-126-959-11	ELECT 0.47MF 20%	50V	C587	1-102-030-00	CERAMIC 330PF 10%	500V
C513	1-124-261-00	ELECT 10MF 20%	50V	C588	1-107-906-11	ELECT 10MF 20%	50V
C514	$\Delta$ 1-129-718-91	FILM 0.022MF 10%	630V	C589	1-102-030-00	CERAMIC 330PF 10%	500V
C515	1-163-809-11	CERAMIC CHIP 0.047MF 10%	25V	C590	1-107-903-11	ELECT 2.2MF 20%	50V
C516	1-102-030-00	CERAMIC 330PF 10%	500V	C591	1-107-365-91	FILM 0.015MF 10%	200V
C517	1-163-024-00	CERAMIC CHIP 0.018MF 10%	50V	C592	1-107-635-11	ELECT 4.7MF 20%	160V
C518	1-107-947-11	ELECT 220MF 20%	160V	C593	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C519	1-163-017-00	CERAMIC CHIP 0.0047MF 10%	50V	C594	1-163-229-11	CERAMIC CHIP 12PF 5%	50V
C520	1-163-257-11	CERAMIC CHIP 180PF 5%	50V	C595	1-107-889-11	ELECT 220MF 20%	25V
C521	1-162-114-00	CERAMIC 0.0047MF 2KV		C596	1-104-665-11	ELECT 100MF 20%	25V
C522	1-126-768-11	ELECT 2200MF 20%	16V	C597	1-164-346-11	CERAMIC CHIP 1MF 16V	
C523	1-107-902-11	ELECT 1MF 20%	50V	C598	1-164-346-11	CERAMIC CHIP 1MF 16V	
C524	$\Delta$ 1-136-081-00	FILM 0.012MF 3%	2KV (20M2U/E)	C599	1-124-261-00	ELECT 10MF 20%	50V
C525	$\Delta$ 1-136-904-11	FILM 0.0115MF 3%	2KV (20M4U/E/A)	C1300	1-104-664-11	ELECT 47MF 20%	25V
C526	$\Delta$ 1-162-116-91	CERAMIC 680PF 10%	2KV	C1301	1-104-664-11	ELECT 47MF 20%	25V
C529	1-107-901-11	ELECT 0.47MF 20%	50V	C1302	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C530	1-104-666-11	ELECT 220MF 20%	25V	C1304	1-104-664-11	ELECT 47MF 20%	25V
C531	1-104-664-11	ELECT 47MF 20%	25V	C1305	1-104-664-11	ELECT 47MF 20%	25V
C532	1-163-031-11	CERAMIC CHIP 0.01MF 50V		C1306	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C533	1-102-212-00	CERAMIC 820PF 10%	500V	C1307	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C534	1-107-662-11	ELECT 22MF 20%	250V	C1308	1-126-933-11	ELECT 100MF 20%	10V
C537	1-126-971-11	ELECT 470MF 20%	50V	C1309	1-163-257-11	CERAMIC CHIP 180PF 5%	50V
C538	1-137-150-11	MYLAR 0.01MF 10%	100V	C1310	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C539	1-130-480-00	FILM 0.0056MF 5%	50V	C1311	1-104-664-11	ELECT 47MF 20%	25V
C540	1-163-133-00	CERAMIC CHIP 470PF 5%	50V	C1312	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C541	1-107-905-11	ELECT 4.7MF 20%	50V	C1313	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C542	1-136-481-11	MYLAR 0.0022MF 10%	100V	C1314	1-104-664-11	ELECT 47MF 20%	25V
C543	1-136-481-11	MYLAR 0.0022MF 10%	100V	C1315	1-104-664-11	ELECT 47MF 20%	25V
C544	1-137-150-11	MYLAR 0.01MF 10%	100V	C1316	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C545	1-102-212-00	CERAMIC 820PF 10%	500V	C1317	1-104-664-11	ELECT 47MF 20%	25V
C546	1-163-119-00	CERAMIC CHIP 120PF 5%	50V	C1318	1-104-664-11	ELECT 47MF 20%	25V
C547	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C1319	1-163-037-11	CERAMIC CHIP 0.022MF 10%	50V
C548	1-102-212-00	CERAMIC 820PF 10%	500V	C1320	1-104-664-11	ELECT 47MF 20%	25V
C549	1-107-906-11	ELECT 10MF 20%	50V	C1321	1-104-664-11	ELECT 47MF 20%	25V
C550	1-107-905-11	ELECT 4.7MF 20%	50V	C1322	1-126-934-11	ELECT 220MF 20%	16V
C551	1-106-375-12	MYLAR 0.022MF 10%	100V	C1323	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C552	1-107-889-11	ELECT 220MF 20%	25V	C1324	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C553	1-106-389-00	MYLAR 0.082MF 10%	200V	C1325	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C554	1-130-736-11	FILM 0.01MF 5%	50V	C1326	1-104-664-11	ELECT 47MF 20%	25V
C555	1-126-964-11	ELECT 10MF 20%	50V	C1327	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C556	1-126-964-11	ELECT 10MF 20%	50V	C1328	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C557	1-106-381-12	MYLAR 0.039MF 10%	100V	C1329	1-126-964-11	ELECT 10MF 20%	50V
C558	1-126-960-11	ELECT 1MF 20%	50V	C1330	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C559	1-136-173-00	FILM 0.47MF 5%	50V	C1331	1-104-664-11	ELECT 47MF 20%	25V
C561	1-136-159-00	FILM 0.033MF 5%	50V	C1332	1-104-664-11	ELECT 47MF 20%	25V
C564	1-126-964-11	ELECT 10MF 20%	50V	C1333	1-104-664-11	ELECT 47MF 20%	25V
C565	1-126-960-11	ELECT 1MF 20%	50V	C1334	1-163-227-11	CERAMIC CHIP 10PF 5%	50V
C566	1-137-150-11	MYLAR 0.01MF 10%	100V	C1335	1-104-664-11	ELECT 47MF 20%	25V
C567	1-136-499-11	FILM 0.047MF 5%	50V	C1336	1-104-664-11	ELECT 47MF 20%	25V
C568	1-126-960-11	ELECT 1MF 20%	50V	C1338	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C569	1-131-350-00	TANTALUM 3.3MF 10%	25V	C1339	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C570	1-126-767-11	ELECT 1000MF 20%	16V	C1340	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C571	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C1341	1-163-275-11	CERAMIC CHIP 0.001MF 5%	50V
				C1342	1-163-105-00	CERAMIC CHIP 33PF 5%	50V
				C1343	1-163-113-00	CERAMIC CHIP 68PF 5%	50V





REF. NO.	PART NO.	DESCRIPTION	REMARK
C1344	1-163-083-00	CERAMIC CHIP 1PF	0.25PF 50V
C1345	1-124-261-00	ELECT 10MF	20% 50V
C1346	1-124-589-11	ELECT 47MF	20% 16V
C1347	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1348	1-163-127-00	CERAMIC CHIP 270PF	5% 50V
C1349	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C1350	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1351	1-126-960-11	ELECT 1MF	20% 50V
C1352	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
C1353	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1354	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1355	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C1356	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1357	1-104-661-91	ELECT 330MF	20% 16V
C1358	1-124-589-11	ELECT 47MF	20% 16V
C1359	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C1360	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C1362	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
C1363	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1364	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C1365	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C1366	1-104-664-11	ELECT 47MF	20% 25V
C1367	1-104-664-11	ELECT 47MF	20% 25V
C1369	1-163-237-11	CERAMIC CHIP 27PF	5% 50V
C1370	1-163-237-11	CERAMIC CHIP 27PF	5% 50V
C1372	1-104-664-11	ELECT 47MF	20% 25V
C1373	1-104-664-11	ELECT 47MF	20% 25V
C1374	1-104-664-11	ELECT 47MF	20% 25V
C1375	1-126-963-11	ELECT 4.7MF	20% 50V
C1378	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C1380	1-163-163-00	CERAMIC CHIP 18PF	5% 50V
C1381	1-163-163-00	CERAMIC CHIP 18PF	5% 50V
C1382	1-126-933-11	ELECT 100MF	20% 10V
C1383	1-104-664-11	ELECT 47MF	20% 25V
C1384	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1385	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1386	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1387	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1388	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C1393	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1400	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1401	1-136-173-00	FILM 0.47MF	5% 50V
C1402	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1403	1-136-173-00	FILM 0.47MF	5% 50V
C1404	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C1405	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1406	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C1407	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V
C1408	1-163-107-00	CERAMIC CHIP 39PF	5% 50V
C1500	1-126-768-11	ELECT 2200MF	20% 16V
C1501	1-126-925-11	ELECT 470MF	20% 10V
C1505	1-136-165-00	FILM 0.1MF	5% 50V
C1506	1-104-661-91	ELECT 330MF	20% 16V
C1507	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C1508	1-126-963-11	ELECT 4.7MF	20% 50V
C1509	1-126-964-11	ELECT 10MF	20% 50V
C1510	1-126-963-11	ELECT 4.7MF	20% 50V
C1511	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C1512	1-126-963-11	ELECT 4.7MF	20% 50V
C1513	1-163-197-00	CERAMIC CHIP 470PF	5% 50V
C1514	1-130-477-00	MYLAR 0.0033MF	5% 50V
C1515	1-126-964-11	ELECT 10MF	20% 50V
C1516	1-163-063-91	CERAMIC CHIP 0.022MF	10% 50V
C1517	1-128-526-11	ELECT 100MF	20% 10V
C1518	1-107-909-11	ELECT 47MF	20% 16V
C1520	1-162-129-00	CERAMIC 150PF	10% 2KV
C1521	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C1524	1-107-910-11	ELECT 100MF	20% 50V

(20M4U/E/A)

REF. NO.	PART NO.	DESCRIPTION	REMARK
C1525	1-162-114-00	CERAMIC 0.0047MF	2KV (20M4U/E/A)
C1530	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1531	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V (20M4U/E/A)
C1532	1-104-664-11	ELECT 47MF	20% 25V (20M4U/E/A)
C1534	1-104-664-11	ELECT 47MF	20% 25V (20M4U/E/A)
C1535	1-104-664-11	ELECT 47MF	20% 25V (20M4U/E/A)
C1536	1-136-165-00	FILM 0.1MF	5% 50V (20M4U/E/A)
C1537	1-130-783-00	MYLAR 0.33MF	10% 100V (20M4U/E/A)
C1538	1-102-074-00	CERAMIC 0.001MF	10% 50V
C2501	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2502	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V

<CONNECTOR>

CN101	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P
CN102	*1-564-514-11	PLUG, CONNECTOR 11P
CN104	*1-564-506-11	PLUG, CONNECTOR 3P
CN105	*1-565-503-11	CONNECTOR, BOARD TO BOARD 12P
CN201	*1-564-506-11	PLUG, CONNECTOR 3P
CN301	*1-564-514-11	PLUG, CONNECTOR 11P
CN302	*1-564-510-11	PLUG, CONNECTOR 7P
CN303	*1-766-745-11	CONNECTOR, BOARD TO BOARD 12P
CN305	1-779-070-21	PIN, CONNECTOR 12P
CN401	*1-564-511-11	PLUG, CONNECTOR 8P
CN402	*1-564-515-11	PLUG, CONNECTOR 12P
CN501	*1-568-536-11	PLUG (MINIATURE DY) 6P (20M4U/E/A)
CN501	*1-580-798-11	CONNECTOR PIN (DY) 6P (20M2U/E)
CN502	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P
CN503	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P
CN504	*1-564-506-11	PLUG, CONNECTOR 3P
CN505	*1-564-506-11	PLUG, CONNECTOR 3P
CN507	1-695-915-11	TAB (CONTACT)
CN508	1-766-240-11	PIN, CONNECTOR (PC BOARD) 2P
CN509	*1-564-506-11	PLUG, CONNECTOR 3P (20M4U/E/A)

<COMPOSITION CIRCUIT BLOCK>

CP300	1-236-366-11	MODULE, TRAP
CP301	1-236-365-11	MODULE, TRAP
CP302	1-808-654-21	MODULE
CP303	1-466-162-61	FILTER BLOCK, COM (CFB-4)

<DIODE>

D100	8-719-404-49	DIODE MA111
D101	8-719-800-76	DIODE 1SS226
D102	8-719-800-76	DIODE 1SS226
D103	8-719-045-70	DIODE 1SV230TPH3
D104	8-719-800-76	DIODE 1SS226
D105	8-719-800-76	DIODE 1SS226
D107	8-719-800-76	DIODE 1SS226
D108	8-719-104-34	DIODE 1S2836
D109	8-719-801-78	DIODE 1SS184
D111	8-719-977-05	DIODE DTZ6.2
D114	8-719-404-49	DIODE MA111
D115	8-719-977-05	DIODE DTZ6.2
D116	8-719-404-49	DIODE MA111
D200	8-719-977-46	DIODE DTZ13C
D300	8-719-025-07	DIODE 1SV232-TPH3
D301	8-719-404-49	DIODE MA111
D303	8-719-977-05	DIODE DTZ6.2
D304	8-719-801-78	DIODE 1SS184
D305	8-719-800-76	DIODE 1SS226
D307	8-719-404-49	DIODE MA111







REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D308	8-719-404-49	DIODE MA111		D518	8-719-404-49	DIODE MA111	
D309	8-719-404-49	DIODE MA111		D519	8-719-404-49	DIODE MA111	
D310	8-719-104-34	DIODE 1S2836		D520	8-719-801-78	DIODE 1SS184	
D311	8-719-045-70	DIODE 1SV230TPH3		D521	8-719-404-49	DIODE MA111	
D313	8-719-801-78	DIODE 1SS184		D522	8-719-977-05	DIODE DTZ6.2	
				D523	8-719-920-76	DIODE 1S2076	
D314	8-719-404-49	DIODE MA111		D524	8-719-200-02	DIODE 10E-2	
D315	8-719-404-49	DIODE MA111		D525	8-719-200-02	DIODE 10E-2	
D317	8-719-404-49	DIODE MA111		D526	8-719-404-49	DIODE MA111	
D320	8-719-404-49	DIODE MA111		D527	8-719-200-02	DIODE 10E-2	
D322	8-719-404-49	DIODE MA111		D528	8-719-300-76	DIODE RH-1A	
				D529	8-719-200-02	DIODE 10E-2	
D323	8-719-404-49	DIODE MA111		D530	8-719-300-76	DIODE RH-1A	
D324	8-719-045-70	DIODE 1SV230TPH3		D531	8-719-977-32	DIODE DTZ11B	
D325	8-719-801-78	DIODE 1SS184		D532	8-719-800-76	DIODE 1SS226	
D326	8-719-045-70	DIODE 1SV230TPH3		D533	8-719-302-43	DIODE EL1Z	
D327	8-719-104-34	DIODE 1S2836					
D332	8-719-404-49	DIODE MA111		D534	8-719-404-49	DIODE MA111	
D333	8-719-404-49	DIODE MA111		D535	8-719-404-49	DIODE MA111	
D335	8-719-404-49	DIODE MA111		D536	8-719-800-76	DIODE 1SS226	
D336	8-719-404-49	DIODE MA111		D537	8-719-800-76	DIODE 1SS226	
D337	8-719-404-49	DIODE MA111		D538	8-719-800-76	DIODE 1SS226	
				D539	8-719-920-76	DIODE 1S2076	
D338	8-719-404-49	DIODE MA111		D540	8-719-404-49	DIODE MA111	
D339	8-719-404-49	DIODE MA111		D541	8-719-801-78	DIODE 1SS184	
D344	8-719-801-78	DIODE 1SS184		D542	8-719-404-49	DIODE MA111	
D345	8-719-104-34	DIODE 1S2836		D543	8-719-404-49	DIODE MA111	
D346	8-719-104-34	DIODE 1S2836					
D347	8-719-104-34	DIODE 1S2836		D544	8-719-404-49	DIODE MA111 (20M4U/E/A)	
D360	1-216-295-91	CONDUCTOR, CHIP		D545	8-719-404-49	DIODE MA111 (20M4U/E/A)	
D361	1-216-295-91	CONDUCTOR, CHIP		D546	8-719-901-19	DIODE V11N (20M4U/E/A)	
D362	8-719-158-40	DIODE RD10SB1		D547	8-719-404-49	DIODE MA111	
D363	8-719-158-40	DIODE RD10SB1		D548	8-719-110-46	DIODE RD16ESB3 (20M4U/E/A)	
D364	8-719-104-34	DIODE 1S2836				<DELAY LINE>	
D365	8-719-404-49	DIODE MA111		DL300	1-415-633-11	DELAY LINE, Y	
D381	8-719-404-49	DIODE MA111		DL301	1-415-632-11	DELAY LINE, Y	
D401	8-719-404-49	DIODE MA111		DL401	1-409-547-11	DELAY LINE	
D404	8-719-800-76	DIODE 1SS226					
						<FERRITE BEAD>	
D405	8-719-801-78	DIODE 1SS184		FB501	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D406	8-719-404-49	DIODE MA111					
D407	8-719-404-49	DIODE MA111				<FILTER>	
D408	8-719-404-49	DIODE MA111		FL300	1-236-547-11	TRAP, LC	
D410	8-719-404-49	DIODE MA111		FL401	1-236-364-11	FILTER, BAND PASS	
D411	8-719-404-49	DIODE MA111				<IC>	
D414	8-719-801-78	DIODE 1SS184		IC101	1-540-044-11	SOCKET, IC (20M2U/E)	
D415	8-719-801-78	DIODE 1SS184		IC101	8-759-462-05	IC uPD78P018FYCW-M01 (20M4U/E/A)	
D416	8-719-801-78	DIODE 1SS184		IC102	8-759-354-28	IC ST24C02FM6TR	
D417	8-719-801-78	DIODE 1SS184		IC103	8-759-008-48	IC MC74HC86F	
				IC104	8-759-262-59	IC uPD6451AGT-632-E2	
D418	8-719-801-78	DIODE 1SS184					
D421	8-719-404-49	DIODE MA111		IC105	8-759-196-70	IC M62358FP-E1	
D422	8-719-404-49	DIODE MA111		IC106	8-759-196-70	IC M62358FP-E1	
D423	8-719-800-76	DIODE 1SS226		IC107	8-759-196-70	IC M62358FP-E1	
D424	8-719-404-49	DIODE MA111		IC108	8-759-042-02	IC S-80743AL-A7-S	
				IC109	8-759-196-70	IC M62358FP-E1	
D425	8-719-800-76	DIODE 1SS226					
D427	8-719-404-49	DIODE MA111		IC110	8-759-196-70	IC M62358FP-E1	
D500	8-719-404-49	DIODE MA111		IC111	8-759-009-22	IC MC14094BF	
D501	8-719-977-03	DIODE DTZ5.6B		IC112	8-759-354-27	IC ST24C01FM6TR	
D502	8-719-979-80	DIODE UF5406		IC200	8-759-420-04	IC AN5265	
				IC301	8-752-053-21	IC CXA1211M	
D503	8-719-404-49	DIODE MA111					
D504	8-719-901-83	DIODE 1SS83		IC302	8-759-998-98	IC LM358D	
D505	8-719-028-72	DIODE RGP02-17EL-6433		IC303	8-752-056-67	IC CXA1214P	
D506	8-719-033-83	DIODE ERD07-15		IC304	8-759-932-67	IC BU4053BCF	
D507	8-719-800-76	DIODE 1SS226		IC305	8-759-631-08	IC M51279FP	
				IC306	8-759-711-32	IC NJM2245M	
D508	8-719-800-76	DIODE 1SS226					
D509	8-719-404-49	DIODE MA111					
D510	8-719-302-43	DIODE EL1Z					
D512	8-719-979-80	DIODE UF5406					
D513	8-719-404-49	DIODE MA111					
D514	8-719-971-20	DIODE ERC38-06					
D515	8-719-971-20	DIODE ERC38-06					
D516	8-719-404-49	DIODE MA111					
D517	8-719-404-49	DIODE MA111					



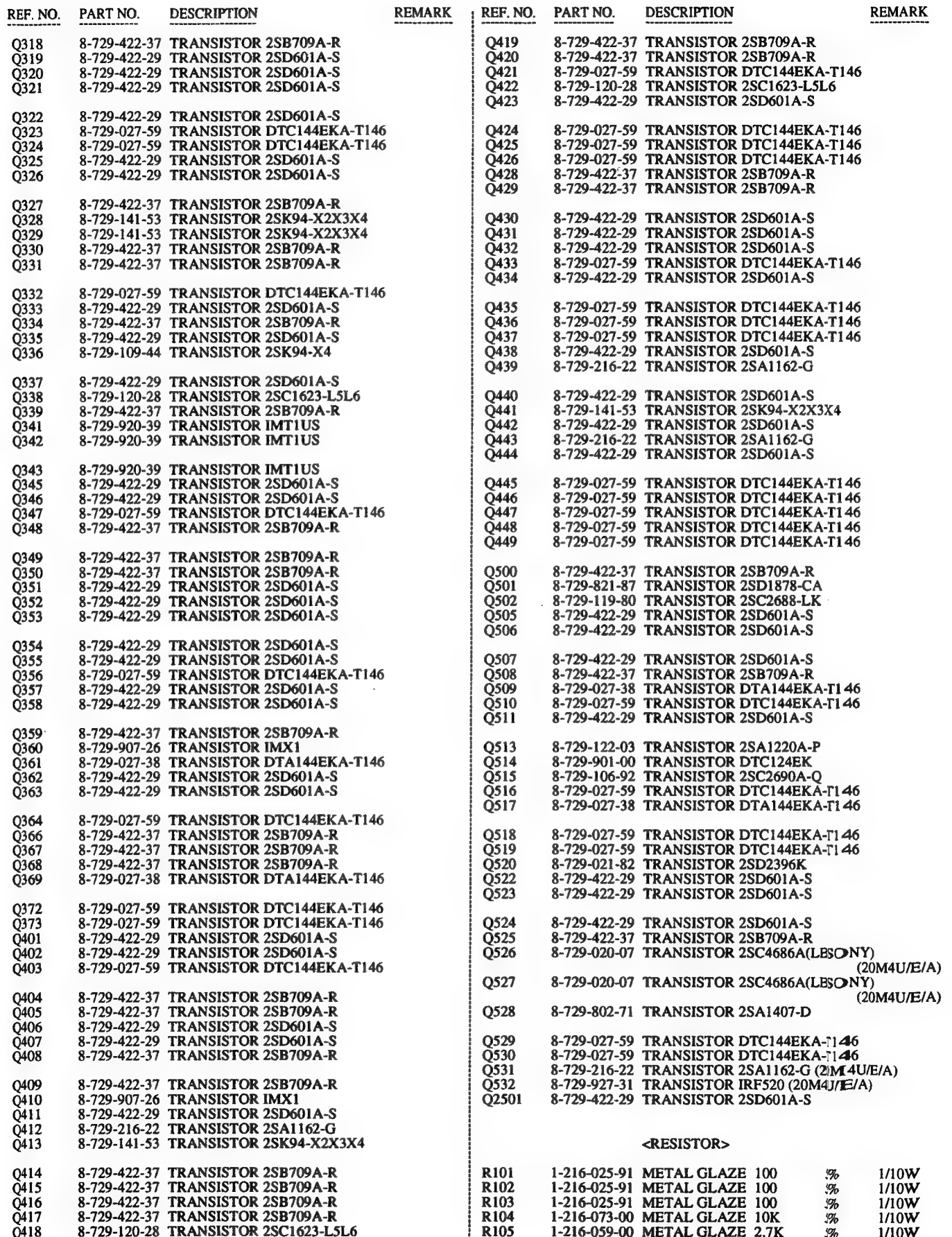


Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

The components identified by shading and mark  are critical for safety.  
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC309	8-759-711-32	IC NJM2245M		L314	1-412-011-31	INDUCTOR CHIP 27UH	
IC310	8-759-932-67	IC BU4053BCF		L316	1-412-011-31	INDUCTOR CHIP 27UH	
IC311	8-759-008-67	IC MC14066BF		L317	1-410-090-41	INDUCTOR 18mH	
IC312	8-759-711-32	IC NJM2245M		L319	1-408-421-00	INDUCTOR 100UH	
IC313	8-759-287-89	IC MM1113XFF					
IC314	8-759-287-89	IC MM1113XFF		L320	1-410-682-31	INDUCTOR 470UH	
IC315	8-759-932-67	IC BU4053BCF		L401	1-410-478-11	INDUCTOR 47UH	
IC316	8-759-084-76	IC MM1111XF		L402	1-410-215-31	INDUCTOR CHIP 82UH	
IC317	8-759-009-51	IC MC14538BF		L403	1-410-215-31	INDUCTOR CHIP 82UH	
IC318	8-759-009-67	IC MC14584BF		L404	1-410-215-31	INDUCTOR CHIP 82UH	
				L405	1-408-419-00	INDUCTOR 68UH	
IC320	8-759-287-89	IC MM1113XFF		L406	1-408-419-00	INDUCTOR 68UH	
IC321	8-759-287-89	IC MM1113XFF		L407	1-408-413-00	INDUCTOR 22UH	
IC322	8-759-287-89	IC MM1113XFF		L408	1-408-413-00	INDUCTOR 22UH	
IC323	8-759-287-89	IC MM1113XFF		L409	1-410-215-31	INDUCTOR CHIP 82UH	
IC324	8-759-287-89	IC MM1113XFF					
IC325	8-759-287-89	IC MM1113XFF		L500	1-459-155-00	COIL (WITH CORE) 45UH	
IC326	8-759-060-00	IC BA10324AF		L501	1-407-365-00	COIL,CHOKE	
IC327	8-759-008-67	IC MC14066BF		L502	1-407-365-00	COIL,CHOKE	
IC350	8-759-100-96	IC uPC4558G2		L503	1-410-093-11	INDUCTOR 33mH	
IC401	8-759-196-69	IC BA7655AF-E2		L504	1-410-666-31	INDUCTOR 18UH	
				L505	1-410-671-31	INDUCTOR 47UH	
IC402	8-752-053-21	IC CXA1211M		L506	1-459-087-00	COIL,HCC DUST CORE 3.9mH (20M4U/E/A)	
IC403	8-759-008-67	IC MC14066BF		L506	1-459-104-00	COIL, DUST CORE (20M2U/E)	
IC404	8-752-067-05	IC CXA1739S		L507	1-410-686-11	INDUCTOR 1mH	
IC405	8-759-932-67	IC BU4053BCF		L508	1-412-530-31	INDUCTOR 27UH	
IC406	8-759-998-98	IC LM358D					
IC407	8-759-008-67	IC MC14066BF		L509	1-459-087-00	COIL,HCC DUST CORE 3.9mH	
IC408	8-759-509-91	IC XRA10393F		L510	1-459-106-00	COIL,DUST CORE	
IC409	8-759-060-00	IC BA10324AF		L512	1-459-232-11	COIL, CORE	
IC410	8-759-009-06	IC MC14052BF		L513	1-412-447-11	INDUCTOR 3.9mH	
IC411	8-759-008-92	IC MC14024BF		L514	1-459-104-00	COIL, DUST CORE	
				L515	1-459-059-00	COIL,DUST CORE	
IC412	8-759-932-67	IC BU4053BCF		L517	1-412-547-21	INDUCTOR 680UH	
IC413	8-759-932-67	IC BU4053BCF					
IC500	8-749-010-08	IC H8D7249				<NEON LAMP>	
IC502	8-759-009-51	IC MC14538BF		NL500	1-519-526-11	LAMP, NEON	
IC503	8-759-009-51	IC MC14538BF					
IC504	8-752-053-21	IC CXA1211M				<TRANSISTOR>	
IC505	8-759-520-07	IC XRA17812T					
IC506	8-759-009-51	IC MC14538BF					
IC507	8-759-100-60	IC uPC1377C		Q101	8-729-027-59	TRANSISTOR DTC144EKA-T146	
IC508	8-752-053-21	IC CXA1211M		Q102	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q103	8-729-216-22	TRANSISTOR 2SA1162-G	
IC509	8-759-998-98	IC LM358D		Q104	8-729-907-26	TRANSISTOR IMX1	
IC510	8-759-009-51	IC MC14538BF		Q105	8-729-027-38	TRANSISTOR DTA144EKA-T146	
IC511	8-759-803-42	IC LA6500-FA (20M4U/E/A)					
IC512	8-759-929-65	IC LM7912CT (20M4U/E/A)		Q107	8-729-027-38	TRANSISTOR DTA144EKA-T146	
		<CHIP CONDUCTOR>		Q108	8-729-422-29	TRANSISTOR 2SD601A-S	
JR302	1-216-295-91	CONDUCTOR, CHIP		Q109	8-729-422-29	TRANSISTOR 2SD601A-S	
JR307	1-216-295-91	CONDUCTOR, CHIP		Q110	8-729-422-29	TRANSISTOR 2SD601A-S	
JR310	1-216-295-91	CONDUCTOR, CHIP		Q111	8-729-027-38	TRANSISTOR DTA144EKA-T146	
				Q112	8-729-422-29	TRANSISTOR 2SD601A-S	
				Q113	8-729-422-29	TRANSISTOR 2SD601A-S	
		<COIL>		Q114	8-729-422-29	TRANSISTOR 2SD601A-S	
L101	1-408-609-41	INDUCTOR 33UH		Q200	8-729-140-96	TRANSISTOR 2SD774-34	
L102	1-408-417-00	INDUCTOR 47UH		Q201	8-729-422-29	TRANSISTOR 2SD601A-S	
L104	1-408-425-00	INDUCTOR 220UH		Q300	8-729-422-29	TRANSISTOR 2SD601A-S	
L105	1-410-482-31	INDUCTOR 100UH		Q301	8-729-422-29	TRANSISTOR 2SD601A-S	
L300	1-410-478-11	INDUCTOR 47UH		Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q303	8-729-422-29	TRANSISTOR 2SD601A-S	
L301	1-408-411-00	INDUCTOR 15UH		Q305	8-729-422-29	TRANSISTOR 2SD601A-S	
L302	1-412-008-31	INDUCTOR CHIP 15UH		Q306	8-729-422-29	TRANSISTOR 2SD601A-S	
L303	1-408-416-00	INDUCTOR 39UH		Q307	8-729-422-29	TRANSISTOR 2SD601A-S	
L304	1-412-008-31	INDUCTOR CHIP 15UH		Q308	8-729-422-29	TRANSISTOR 2SD601A-S	
L305	1-410-196-11	INDUCTOR CHIP 2.2UH		Q309	8-729-422-37	TRANSISTOR 2SB709A-R	
				Q310	8-729-422-37	TRANSISTOR 2SB709A-R	
L306	1-408-416-00	INDUCTOR 39UH					
L307	1-408-411-00	INDUCTOR 15UH		Q311	8-729-422-37	TRANSISTOR 2SB709A-R	
L308	1-410-466-41	INDUCTOR 4.7UH		Q312	8-729-422-29	TRANSISTOR 2SD601A-S	
L309	1-410-470-11	INDUCTOR 10UH		Q313	8-729-422-37	TRANSISTOR 2SB709A-R	
L311	1-410-470-11	INDUCTOR 10UH		Q314	8-729-027-38	TRANSISTOR DTA144EKA-T146	
				Q315	8-729-422-37	TRANSISTOR 2SB709A-R	
L312	1-412-011-31	INDUCTOR CHIP 27UH		Q316	8-729-422-29	TRANSISTOR 2SD601A-S	









REF. NO.	PART NO.	DESCRIPTION	REMARK
R106	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R107	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R108	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R109	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R110	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R113	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R117	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R119	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R124	1-216-295-91	CONDUCTOR, CHIP	
R130	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R132	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R133	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R134	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R135	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R137	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R140	1-216-033-00	METAL GLAZE 220	5% 1/10W
R141	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R144	1-216-295-91	CONDUCTOR, CHIP	
R149	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R151	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R154	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R155	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R157	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R158	1-216-295-91	CONDUCTOR, CHIP	
R159	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R160	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R162	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R163	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R164	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R165	1-216-295-91	CONDUCTOR, CHIP	
R167	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R168	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R169	1-216-107-00	METAL GLAZE 270K	5% 1/10W
R171	1-216-031-00	METAL GLAZE 180	5% 1/10W
R172	1-216-295-91	CONDUCTOR, CHIP	
R177	1-216-214-00	METAL GLAZE 4.7K	5% 1/8W
R181	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R184	1-216-649-11	METAL CHIP 820	0.50% 1/10W
R185	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R187	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R189	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R190	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R192	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R195	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R197	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R199	1-216-295-91	CONDUCTOR, CHIP	
R200	1-216-686-11	METAL CHIP 30K	0.50% 1/10W
R201	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R202	1-212-857-00	FUSIBLE 10	5% 1/4W F
R203	1-260-095-11	CARBON 470	5% 1/2W
R204	1-260-072-11	CARBON 4.7	5% 1/2W
R205	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R206	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R207	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R208	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R209	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R210	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R211	1-249-393-11	CARBON 10	5% 1/4W F
R237	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R301	1-216-025-91	METAL GLAZE 100	5% 1/10W
R302	1-216-025-91	METAL GLAZE 100	5% 1/10W
R303	1-216-025-91	METAL GLAZE 100	5% 1/10W
R304	1-216-025-91	METAL GLAZE 100	5% 1/10W
R305	1-216-295-91	CONDUCTOR, CHIP	
R306	1-216-295-91	CONDUCTOR, CHIP	
R307	1-216-115-00	METAL GLAZE 560K	5% 1/10W
R308	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R311	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R312	1-216-073-00	METAL GLAZE 10K	5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R313	1-216-648-11	METAL CHIP 750	0.50% 1/10W
R314	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R315	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R316	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R317	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R318	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R319	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R320	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R321	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R322	1-216-035-00	METAL GLAZE 270	5% 1/10W
R323	1-216-109-00	METAL GLAZE 330K	5% 1/10W
R324	1-216-101-00	METAL GLAZE 150K	5% 1/10W
R325	1-216-037-00	METAL GLAZE 330	5% 1/10W
R326	1-216-033-00	METAL GLAZE 220	5% 1/10W
R328	1-216-121-91	METAL GLAZE 1M	5% 1/10W
R329	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R330	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R331	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R332	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R333	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R334	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R335	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R336	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R337	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R338	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R339	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R340	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R341	1-216-673-11	METAL CHIP 8.2K	0.50% 1/10W
R342	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R343	1-216-095-00	METAL GLAZE 82K	5% 1/10W
R344	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R345	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R346	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R347	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R348	1-216-031-00	METAL GLAZE 180	5% 1/10W
R349	1-216-694-11	METAL CHIP 62K	0.50% 1/10W
R350	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R351	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R352	1-216-675-11	METAL CHIP 10K	0.50% 1/10W
R353	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R354	1-216-119-00	METAL GLAZE 820K	5% 1/10W
R355	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R356	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R357	1-216-121-91	METAL GLAZE 1M	5% 1/10W
R358	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W
R359	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R360	1-216-039-00	METAL GLAZE 390	5% 1/10W
R361	1-216-017-91	METAL GLAZE 47	5% 1/10W
R362	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R363	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R364	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R366	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R367	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R368	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R371	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R372	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W
R373	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R374	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R375	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W
R376	1-216-111-91	METAL GLAZE 390K	5% 1/10W
R378	1-216-114-00	METAL GLAZE 510K	5% 1/10W
R379	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R380	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R381	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R382	1-216-101-00	METAL GLAZE 150K	5% 1/10W
R383	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R384	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R385	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R386	1-216-091-00	METAL GLAZE 56K	5% 1/10W	R460	1-216-295-91	CONDUCTOR, CHIP	
R387	1-216-029-00	METAL GLAZE 150	5% 1/10W	R462	1-216-651-11	METAL CHIP 1K	0.50% 1/10W
R388	1-216-039-00	METAL GLAZE 390	5% 1/10W	R463	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R389	1-216-649-11	METAL CHIP 820	0.50% 1/10W	R464	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R390	1-249-393-11	CARBON 10	5% 1/4W F	R465	1-216-025-91	METAL GLAZE 100	5% 1/10W
R391	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R466	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R393	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R467	1-216-121-91	METAL GLAZE 1M	5% 1/10W
R394	1-216-083-00	METAL GLAZE 27K	5% 1/10W	R468	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R395	1-216-651-11	METAL CHIP 1K	0.50% 1/10W	R469	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R396	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R470	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R397	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R471	1-216-109-00	METAL GLAZE 330K	5% 1/10W
R398	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R472	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R399	1-216-111-91	METAL GLAZE 390K	5% 1/10W	R473	1-216-121-91	METAL GLAZE 1M	5% 1/10W
R400	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R474	1-216-649-11	METAL CHIP 820	0.50% 1/10W
R401	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W	R475	1-216-025-91	METAL GLAZE 100	5% 1/10W
R402	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W	R476	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R403	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W	R477	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R404	1-216-029-00	METAL GLAZE 150	5% 1/10W	R478	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R405	1-216-121-91	METAL GLAZE 1M	5% 1/10W	R479	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R406	1-216-083-00	METAL GLAZE 27K	5% 1/10W	R480	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R407	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R481	1-216-033-00	METAL GLAZE 220	5% 1/10W
R408	1-216-689-11	METAL CHIP 39K	0.50% 1/10W	R482	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R410	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W	R483	1-216-025-91	METAL GLAZE 100	5% 1/10W
R411	1-216-033-00	METAL GLAZE 220	5% 1/10W	R484	1-216-651-11	METAL CHIP 1K	0.50% 1/10W
R412	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R485	1-216-033-00	METAL GLAZE 220	5% 1/10W
R413	1-216-121-91	METAL GLAZE 1M	5% 1/10W	R486	1-216-681-11	METAL CHIP 18K	0.50% 1/10W
R414	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R487	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
R414	1-216-295-91	CONDUCTOR, CHIP (20M2U/E)	(20M4U/E/A)	R488	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R416	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R489	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R417	1-216-665-11	METAL CHIP 3.9K	0.50% 1/10W	R490	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R418	1-216-667-11	METAL CHIP 4.7K	0.50% 1/10W	R491	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R420	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R492	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R422	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R493	1-216-295-91	CONDUCTOR, CHIP	
R423	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R494	1-216-696-11	METAL CHIP 75K	0.50% 1/10W
R424	1-216-033-00	METAL GLAZE 220	5% 1/10W	R495	1-216-651-11	METAL CHIP 1K	0.50% 1/10W
R425	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R496	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R426	1-216-039-00	METAL GLAZE 390	5% 1/10W	R497	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
R427	1-216-033-00	METAL GLAZE 220	5% 1/10W	R498	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R428	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R499	1-216-033-00	METAL GLAZE 220	5% 1/10W
R429	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R500	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R430	1-216-119-00	METAL GLAZE 820K	5% 1/10W	R501	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R431	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R502	1-216-677-11	METAL CHIP 12K	0.50% 1/10W
R432	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R503	1-216-677-11	METAL CHIP 12K	0.50% 1/10W
R434	1-216-109-00	METAL GLAZE 330K	5% 1/10W	R504	1-216-111-91	METAL GLAZE 390K	5% 1/10W
R435	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R505	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R436	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R506	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R437	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R507	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R438	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W	R508	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R439	1-216-033-00	METAL GLAZE 220	5% 1/10W	R509	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R440	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R510	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R441	1-216-645-11	METAL CHIP 560	0.50% 1/10W	R511	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R442	1-216-647-11	METAL CHIP 680	0.50% 1/10W	R512	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R443	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R513	1-216-295-91	CONDUCTOR, CHIP	
R444	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R514	1-216-295-91	CONDUCTOR, CHIP	
R445	1-216-095-00	METAL GLAZE 82K	5% 1/10W	R515	1-216-675-11	METAL CHIP 10K	0.50% 1/10W
R447	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W	R516	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R448	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R517	1-214-896-81	METAL 20K	1% 1/2W
R449	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R518	1-260-123-11	CARBON 100K	5% 1/2W
R450	1-216-121-91	METAL GLAZE 1M	5% 1/10W	R519	1-216-017-91	METAL GLAZE 47	5% 1/10W
R451	1-216-037-00	METAL GLAZE 330	5% 1/10W	R520	1-249-423-11	CARBON 3.3K	5% 1/4W F
R452	1-216-651-11	METAL CHIP 1K	0.50% 1/10W	R521	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R453	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R523	1-215-892-11	METAL OXIDE 1K	5% 2W F
R455	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R524	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R456	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W	R525	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R457	1-216-025-91	METAL GLAZE 100	5% 1/10W	R526	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R458	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R527	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R459	1-216-649-11	METAL CHIP 820	0.50% 1/10W	R528	1-216-089-91	METAL GLAZE 47K	5% 1/10W
				R529	1-216-089-91	METAL GLAZE 47K	5% 1/10W





REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R530	1-216-367-11	METAL OXIDE 0.68	5% 2W F	R592	1-247-688-11	CARBON 10	5% 1/4W F
R531	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R593	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R532	1-216-478-11	METAL OXIDE 390	5% 3W F	R594	1-260-104-91	CARBON 2.7K	5% 1/2W
R533	1-247-723-71	CARBON 6.8K	5% 1/4W F	R595	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R534	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R596	1-214-754-00	METAL 11K	1% 1/4W
R535	1-249-448-11	CARBON 1.2	5% 1/4W F	R597	1-249-417-11	CARBON 1K	5% 1/4W F
R536	1-216-101-00	METAL GLAZE 150K	5% 1/10W	R598	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R537	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R599	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R539	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R1103	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R540	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1104	1-216-699-11	METAL CHIP 100K	0.50% 1/10W
R541	1-249-383-11	CARBON 1.5	5% 1/4W F	R1105	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R542	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1106	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R543	1-212-883-00	FUSIBLE 120	5% 1/4W F	R1107	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R544	1-216-095-00	METAL GLAZE 82K	5% 1/10W	R1108	1-216-681-11	METAL CHIP 18K	0.50% 1/10W
R545	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1111	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R546	1-249-425-11	CARBON 4.7K	5% 1/4W F	R1112	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R547	1-216-091-00	METAL GLAZE 56K	5% 1/10W	R1113	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R548	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1114	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R549	1-216-677-11	METAL CHIP 12K	0.50% 1/10W	R1115	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R550	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W	R1116	1-216-677-11	METAL CHIP 12K	0.50% 1/10W
R551	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R1117	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R552	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1118	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R553	1-216-083-00	METAL GLAZE 27K	5% 1/10W	R1119	1-216-694-11	METAL CHIP 62K	0.50% 1/10W
R554	1-216-095-00	METAL GLAZE 82K	5% 1/10W	R1120	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R555	1-216-692-11	METAL CHIP 51K	0.50% 1/10W	R1123	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R556	1-216-463-00	METAL OXIDE 12K	5% 2W F	R1124	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R558	1-215-868-00	METAL OXIDE 680	5% 1W F	R1125	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R559	1-216-109-00	METAL GLAZE 330K	5% 1/10W	R1126	1-216-041-00	METAL GLAZE 470	5% 1/10W
R560	1-216-091-00	METAL GLAZE 56K	5% 1/10W	R1128	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R561	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R1129	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R562	1-247-692-71	CARBON 22	5% 1/4W F (20M2U/E)	R1130	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R562	1-247-696-11	CARBON 47	5% 1/4W F (20M4U/E/A)	R1131	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R563	1-216-017-91	METAL GLAZE 47	5% 1/10W	R1132	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R564	1-216-107-00	METAL GLAZE 270K	5% 1/10W	R1133	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R565	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1134	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R566	1-216-685-11	METAL CHIP 27K	0.50% 1/10W (20M2U/E)	R1136	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R566	1-216-691-11	METAL CHIP 47K	0.50% 1/10W (20M4U/E/A)	R1137	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R567	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1138	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R568	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1139	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R569	1-260-119-11	CARBON 47K	5% 1/2W	R1140	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
R571	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R1141	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R572	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	R1142	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
R573	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W	R1143	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
R574	1-216-089-91	METAL GLAZE 47K	5% 1/10W (20M4U/E/A)	R1144	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R575	1-249-383-11	CARBON 1.5	5% 1/4W F	R1145	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R576	1-216-101-00	METAL GLAZE 150K	5% 1/10W	R1146	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R577	1-216-073-00	METAL GLAZE 10K	5% 1/10W (20M4U/E/A)	R1147	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R578	1-216-693-11	METAL CHIP 56K	0.50% 1/10W	R1150	1-216-037-00	METAL GLAZE 330	5% 1/10W
R580	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R1151	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R581	1-216-049-91	METAL GLAZE 1K	5% 1/10W (20M4U/E/A)	R1155	1-216-133-00	METAL GLAZE 3.3M	5% 1/10W
R582	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R1161	1-218-776-11	METAL CHIP 1M	0.50% 1/10W
R583	1-216-039-00	METAL GLAZE 390	5% 1/10W	R1162	1-218-768-11	METAL CHIP 470K	0.50% 1/10W
R584	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W (20M4U/E/A)	R1163	1-216-033-00	METAL GLAZE 220	5% 1/10W
R584	1-216-073-00	METAL GLAZE 10K	5% 1/10W (20M2U/E)	R1164	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R585	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1165	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R586	1-216-686-11	METAL CHIP 30K	0.50% 1/10W	R1167	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R587	1-216-675-11	METAL CHIP 10K	0.50% 1/10W	R1168	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R588	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R1169	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R589	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W	R1170	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R590	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1171	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R591	1-216-683-11	METAL CHIP 22K	0.50% 1/10W	R1172	1-216-085-00	METAL GLAZE 33K	5% 1/10W
				R1173	1-216-295-91	CONDUCTOR, CHIP	
				R1174	1-216-089-91	METAL GLAZE 47K	5% 1/10W
				R1177	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
				R1179	1-216-041-00	METAL GLAZE 470	5% 1/10W
				R1180	1-216-089-91	METAL GLAZE 47K	5% 1/10W
				R1182	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W
				R1183	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
				R1184	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R1185	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W	R1357	1-216-101-00	METAL GLAZE 150K	5% 1/10W
R1186	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W	R1358	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1187	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W	R1359	1-216-099-00	METAL GLAZE 120K	5% 1/10W
				R1360	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R1188	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W	R1361	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R1189	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W				
R1190	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W	R1362	1-216-676-11	METAL CHIP 11K	0.50% 1/10W
R1191	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W	R1363	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R1192	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W	R1364	1-216-073-00	METAL GLAZE 10K	5% 1/10W
				R1365	1-216-131-11	METAL GLAZE 2.7M	5% 1/10W
R1193	1-216-025-91	METAL GLAZE 100	5% 1/10W	R1366	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1194	1-216-085-00	METAL GLAZE 33K	5% 1/10W				
R1195	1-216-025-91	METAL GLAZE 100	5% 1/10W	R1367	1-216-660-11	METAL CHIP 2.4K	0.50% 1/10W
R1196	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R1368	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R1197	1-216-025-91	METAL GLAZE 100	5% 1/10W	R1369	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
				R1370	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R1198	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R1371	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R1301	1-216-029-00	METAL GLAZE 150	5% 1/10W				
R1302	1-216-029-00	METAL GLAZE 150	5% 1/10W	R1372	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1303	1-216-039-00	METAL GLAZE 390	5% 1/10W	R1373	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R1304	1-216-689-11	METAL GLAZE 39K	5% 1/10W	R1374	1-216-101-00	METAL GLAZE 150K	5% 1/10W
				R1375	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R1305	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1376	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R1306	1-216-645-11	METAL CHIP 560	0.50% 1/10W				
R1307	1-216-091-00	METAL GLAZE 56K	5% 1/10W	R1377	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R1308	1-216-645-11	METAL CHIP 560	0.50% 1/10W	R1378	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R1309	1-216-025-91	METAL GLAZE 100	5% 1/10W	R1379	1-216-037-00	METAL GLAZE 330	5% 1/10W
				R1380	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R1311	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R1381	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R1312	1-216-027-00	METAL GLAZE 120	5% 1/10W				
R1313	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R1382	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1314	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1383	1-216-681-11	METAL CHIP 18K	0.50% 1/10W
R1315	1-216-025-91	METAL GLAZE 100	5% 1/10W	R1384	1-216-091-00	METAL GLAZE 56K	5% 1/10W
				R1385	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1316	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R1386	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R1317	1-216-033-00	METAL GLAZE 220	5% 1/10W				
R1318	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R1387	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
R1319	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R1388	1-216-689-11	METAL CHIP 39K	0.50% 1/10W
R1320	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1389	1-216-658-11	METAL CHIP 2K	0.50% 1/10W
				R1390	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R1321	1-216-649-11	METAL CHIP 820	0.50% 1/10W	R1391	1-216-025-91	METAL GLAZE 100	5% 1/10W
R1322	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W				
R1324	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W	R1392	1-216-041-00	METAL GLAZE 470	5% 1/10W
R1325	1-216-652-11	METAL CHIP 1.1K	0.50% 1/10W	R1393	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R1326	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1394	1-216-041-00	METAL GLAZE 470	5% 1/10W
				R1395	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1327	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1396	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1328	1-216-125-00	METAL GLAZE 1.5M	5% 1/10W				
R1329	1-216-103-00	METAL GLAZE 180K	5% 1/10W	R1397	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R1330	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1399	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1331	1-216-679-11	METAL CHIP 15K	0.50% 1/10W	R1401	1-216-085-00	METAL GLAZE 33K	5% 1/10W
				R1402	1-216-295-91	CONDUCTOR, CHIP	
R1332	1-216-671-11	METAL CHIP 6.8K	0.50% 1/10W	R1403	1-216-651-11	METAL CHIP 1K	0.50% 1/10W
R1333	1-216-049-91	METAL GLAZE 1K	5% 1/10W				
R1334	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W	R1404	1-216-681-11	METAL CHIP 18K	0.50% 1/10W
R1335	1-249-401-11	CARBON 47	5% 1/4W F	R1405	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1336	1-216-095-00	METAL GLAZE 82K	5% 1/10W	R1406	1-216-653-11	METAL CHIP 1.2K	0.50% 1/10W
				R1407	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R1337	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W	R1408	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R1338	1-216-647-11	METAL CHIP 680	0.50% 1/10W				
R1339	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1409	1-216-295-91	CONDUCTOR, CHIP	
R1340	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1410	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W
R1341	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1411	1-216-073-00	METAL GLAZE 10K	5% 1/10W
				R1412	1-216-107-00	METAL GLAZE 270K	5% 1/10W
R1342	1-216-083-00	METAL GLAZE 27K	5% 1/10W	R1413	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1343	1-216-037-00	METAL GLAZE 330	5% 1/10W				
R1344	1-216-093-00	METAL GLAZE 68K	5% 1/10W	R1414	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1345	1-216-109-00	METAL GLAZE 330K	5% 1/10W	R1415	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R1346	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R1416	1-216-113-00	METAL GLAZE 470K	5% 1/10W
				R1417	1-216-033-00	METAL GLAZE 220	5% 1/10W
R1347	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1418	1-216-033-00	METAL GLAZE 220	5% 1/10W
R1348	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W				
R1349	1-216-035-00	METAL GLAZE 270	5% 1/10W	R1419	1-216-025-91	METAL GLAZE 100	5% 1/10W
R1350	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1420	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1351	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1421	1-216-649-11	METAL CHIP 820	0.50% 1/10W
				R1422	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R1352	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R1423	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1353	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W				
R1354	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R1424	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1355	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1425	1-216-013-00	METAL GLAZE 33	5% 1/10W
R1356	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R1426	1-216-113-00	METAL GLAZE 470K	5% 1/10W
				R1427	1-216-681-11	METAL CHIP 18K	0.50% 1/10W





• The components identified by **A** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
R1428	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1429	1-216-668-11	METAL CHIP 5.1K	0.50% 1/10W
R1430	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1431	1-216-129-00	METAL GLAZE 2.2M	5% 1/10W
R1432	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1433	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R1434	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R1435	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R1436	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1437	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R1438	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1439	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R1440	1-216-041-00	METAL GLAZE 470	5% 1/10W
R1441	1-216-033-00	METAL GLAZE 220	5% 1/10W
R1442	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1443	1-216-013-00	METAL GLAZE 33	5% 1/10W
R1444	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1445	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1446	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1447	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1448	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R1449	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1450	1-216-129-00	METAL GLAZE 2.2M	5% 1/10W
R1451	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R1452	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R1453	1-216-013-00	METAL GLAZE 33	5% 1/10W
R1454	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R1455	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R1456	1-216-129-00	METAL GLAZE 2.2M	5% 1/10W
R1457	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1458	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R1459	1-216-133-00	METAL GLAZE 3.3M	5% 1/10W
R1460	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R1461	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R1462	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R1463	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R1464	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1465	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R1466	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R1467	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1468	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R1469	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1470	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1471	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R1472	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R1473	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1475	1-216-677-11	METAL CHIP 12K	0.50% 1/10W
R1476	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R1477	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1478	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1480	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1481	1-216-115-00	METAL GLAZE 560K	5% 1/10W
R1482	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1483	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1484	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1485	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R1486	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R1487	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R1488	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R1489	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R1490	1-216-035-00	METAL GLAZE 270	5% 1/10W
R1491	1-216-035-00	METAL GLAZE 270	5% 1/10W
R1492	1-216-035-00	METAL GLAZE 270	5% 1/10W
R1493	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R1494	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1495	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1496	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1498	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1499	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R1500	1-216-649-11	METAL CHIP 820	0.50% 1/10W
R1501	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1502	1-260-105-11	CARBON 3.3K	5% 1/2W
R1503	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R1504	1-216-686-11	METAL CHIP 30K	0.50% 1/10W
R1505	1-247-688-11	CARBON 10	5% 1/4W F
R1506	1-216-041-00	METAL GLAZE 470	5% 1/10W (20M2U/E)
R1506	1-216-049-91	METAL GLAZE 1K	5% 1/10W (20M4U/E/A)
R1507	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R1508	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R1509	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R1510	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R1511	1-216-360-11	METAL OXIDE 8.2	5% 1W F
R1512	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R1513	1-247-752-11	CARBON 1K	5% 1/2W F
R1514	1-247-711-11	CARBON 680	5% 1/4W F
R1515	1-216-350-11	METAL OXIDE 1.2	5% 1W F
R1516	1-216-101-00	METAL GLAZE 150K	5% 1/10W
R1517	1-216-109-00	METAL GLAZE 330K	5% 1/10W
R1518	1-215-867-00	METAL OXIDE 470	5% 1W F
R1519	1-216-355-11	METAL OXIDE 3.3	5% 1W F
R1520	1-216-027-00	METAL GLAZE 120	5% 1/10W
R1521	1-216-029-00	METAL GLAZE 150	5% 1/10W
R1523	1-216-350-11	METAL OXIDE 1.2	5% 1W F
R1524	1-216-427-00	METAL OXIDE 120	5% 1W F
R1525	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R1526	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1527	1-249-413-11	CARBON 470	5% 1/4W F
R1528	1-215-869-11	METAL OXIDE 1K	5% 1W F
R1529	1-202-829-11	SOLID 8.2K	20% 1/2W
R1530	1-216-115-00	METAL GLAZE 560K	5% 1/10W
R1531	1-247-697-11	CARBON 56	5% 1/4W F
R1532	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R1533	1-249-414-11	CARBON 560	5% 1/4W F
R1534	1-216-659-11	METAL CHIP 2.2K	0.50% 1/10W
R1536	1-216-659-11	METAL CHIP 2.2K	0.50% 1/10W
R1537	1-249-389-11	CARBON 4.7	5% 1/4W F
R1538	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1539	1-216-097-91	METAL GLAZE 100K	5% 1/10W (20M4U/E/A)
R1540	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R1541	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1542	1-247-692-71	CARBON 22	5% 1/4W F (20M4U/E/A)
R1543	1-216-027-00	METAL GLAZE 120	5% 1/10W
R1547	1-216-393-00	METAL OXIDE 2.2	5% 3W F
R1548	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R1549	1-260-094-11	CARBON 390	5% 1/2W
R1550	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R1551	1-249-393-11	CARBON 10	5% 1/4W F
R1552	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R1553	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R1554	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R1555	1-216-295-91	CONDUCTOR, CHIP	
R1556	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1557	1-218-760-11	METAL CHIP 220K	0.50% 1/10W
R1558	1-249-393-11	CARBON 10	5% 1/4W F
R1559	1-249-393-11	CARBON 10	5% 1/4W F
R1560	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R1564	1-216-645-11	METAL CHIP 560	0.50% 1/10W (20M4U/E/A)
R1567	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1568	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1569	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1570	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1571	1-216-103-00	METAL GLAZE 180K	5% 1/10W
R1572	1-216-101-00	METAL GLAZE 150K	5% 1/10W
R1573	1-216-073-00	METAL GLAZE 10K	5% 1/10W





REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R1574	1-216-041-00	METAL GLAZE 470	5% 1/10W	R2331	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R1575	1-216-025-91	METAL GLAZE 100	5% 1/10W	R2332	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R1576	1-216-025-91	METAL GLAZE 100	5% 1/10W	R2333	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R1577	1-216-025-91	METAL GLAZE 100	5% 1/10W	R2334	1-216-041-00	METAL GLAZE 470	5% 1/10W
R1578	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R2335	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1579	1-216-689-11	METAL CHIP 39K	0.50% 1/10W	R2336	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R1580	1-216-083-00	METAL GLAZE 27K	5% 1/10W (20M4U/E/A)	R2337	1-216-037-00	METAL GLAZE 330	5% 1/10W
R1581	1-208-612-11	METAL OXIDE 10M	5% 1W (20M4U/E/A)	R2338	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1582	1-208-610-11	METAL OXIDE 2M	5% 1W (20M4U/E/A)	R2339	1-216-037-00	METAL GLAZE 330	5% 1/10W
R1583	1-212-998-00	FUSIBLE 470	5% 1/2W F (20M4U/E/A)	R2340	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R1584	1-216-674-11	METAL CHIP 9.1K	0.50% 1/10W (20M4U/E/A)	R2341	1-216-037-00	METAL GLAZE 330	5% 1/10W
R1585	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W (20M4U/E/A)	R2342	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
R1586	1-216-691-11	METAL CHIP 47K	0.50% 1/10W (20M4U/E/A)	R2343	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R1587	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W (20M4U/E/A)	R2344	1-216-121-91	METAL GLAZE 1M	5% 1/10W
R1588	1-216-298-00	METAL GLAZE 2.2	5% 1/10W (20M4U/E/A)	R2345	1-216-681-11	METAL CHIP 18K	0.50% 1/10W
R1589	1-216-386-11	METAL OXIDE 0.56	5% 3W F	R2346	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1590	1-216-001-00	METAL GLAZE 10	5% 1/10W (20M4U/E/A)	R2347	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1591	1-249-443-11	CARBON 0.47	5% 1/4W F (20M4U/E/A)	R2348	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1592	1-247-760-11	CARBON 4.7K	5% 1/2W F (20M4U/E/A)	R2349	1-216-679-11	METAL CHIP 15K	0.50% 1/10W
R1593	1-249-485-11	CARBON 8.2	5% 1/2W F (20M4U/E/A)	R2350	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1594	1-216-360-11	METAL OXIDE 8.2	5% 1W F (20M4U/E/A)	R2351	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1595	1-216-101-00	METAL GLAZE 150K	5% 1/10W	R2352	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R1596	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R2353	1-216-041-00	METAL GLAZE 470	5% 1/10W
R1597	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R2354	1-216-025-91	METAL GLAZE 100	5% 1/10W
R1598	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R2358	1-216-025-91	METAL GLAZE 100	5% 1/10W
R1599	1-202-830-00	SOLID 10K	20% 1/2W (20M4U/E/A)	R2361	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R2300	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R2362	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R2301	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R2363	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R2302	1-216-671-11	METAL CHIP 6.8K	0.50% 1/10W	R2364	1-216-025-91	METAL GLAZE 100	5% 1/10W
R2303	1-216-093-00	METAL GLAZE 68K	5% 1/10W	R2365	1-216-687-11	METAL CHIP 33K	0.50% 1/10W
R2304	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R2366	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R2305	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R2367	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R2306	1-216-089-91	METAL GLAZE 47K	5% 1/10W	R2368	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R2307	1-216-033-00	METAL GLAZE 220	5% 1/10W	R2369	1-216-675-11	METAL CHIP 10K	0.50% 1/10W
R2308	1-216-103-00	METAL GLAZE 180K	5% 1/10W	R2371	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R2309	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R2372	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R2310	1-216-095-00	METAL GLAZE 82K	5% 1/10W	R2374	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R2311	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R2375	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2312	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W	R2376	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2313	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R2377	1-216-033-00	METAL GLAZE 220	5% 1/10W
R2314	1-216-645-11	METAL CHIP 560	0.50% 1/10W	R2378	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2315	1-216-679-11	METAL CHIP 15K	0.50% 1/10W	R2379	1-216-033-00	METAL GLAZE 220	5% 1/10W
R2316	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R2380	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2317	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R2381	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2318	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W	R2382	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2319	1-216-093-00	METAL GLAZE 68K	5% 1/10W	R2383	1-216-033-00	METAL GLAZE 220	5% 1/10W
R2320	1-216-677-11	METAL CHIP 12K	0.50% 1/10W	R2384	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R2321	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R2385	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2322	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R2386	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2323	1-216-683-11	METAL CHIP 22K	0.50% 1/10W	R2387	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2324	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R2388	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2325	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W	R2389	1-216-033-00	METAL GLAZE 220	5% 1/10W
R2326	1-216-041-00	METAL GLAZE 470	5% 1/10W	R2390	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R2327	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	R2391	1-216-647-11	METAL CHIP 680	0.50% 1/10W
R2328	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R2392	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2329	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	R2393	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2330	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R2394	1-216-081-00	METAL GLAZE 22K	5% 1/10W
				R2396	1-216-041-00	METAL GLAZE 470	5% 1/10W
				R2397	1-216-113-00	METAL GLAZE 470K	5% 1/10W
				R2398	1-216-109-00	METAL GLAZE 330K	5% 1/10W
				R2399	1-216-073-00	METAL GLAZE 10K	5% 1/10W
				R2501	1-216-083-00	METAL GLAZE 27K	5% 1/10W
				R2502	1-216-085-00	METAL GLAZE 33K	5% 1/10W
				R2503	1-216-097-91	METAL GLAZE 100K	5% 1/10W
				R2504	1-216-101-00	METAL GLAZE 150K	5% 1/10W
				R2505	1-216-113-00	METAL GLAZE 470K	5% 1/10W
				R2506	1-216-099-00	METAL GLAZE 120K	5% 1/10W (20M2U/E)
				R2506	1-216-101-00	METAL GLAZE 150K	5% 1/10W (20M4U/E/A)





Les composants identifiés par  
une trame et une marque  $\Delta$   
sont critiques pour la sécurité.  
Ne les remplacer que par une  
pièce portant le numéro spécifié.

The components identified by  
shading and mark  $\Delta$  are critical  
for safety.  
Replace only with part number  
specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
R2507	1-216-105-91	METAL GLAZE 220K	5% 1/10W (20M2U/E)
R2507	1-216-109-00	METAL GLAZE 330K	5% 1/10W (20M4U/E/A)
R2551	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R2552	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R2553	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R2555	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
R2556	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R2557	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R2558	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R2559	1-216-039-00	METAL GLAZE 390	5% 1/10W
R2560	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R2561	1-216-001-00	METAL GLAZE 10	5% 1/10W
R2562	1-216-001-00	METAL GLAZE 10	5% 1/10W
R2563	1-249-421-11	CARBON 2.2K	5% 1/4W
R3301	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3302	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R3303	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R3304	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
R3305	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R3306	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R3308	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R3309	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3310	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3311	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R3312	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R3317	1-216-675-11	METAL CHIP 10K	0.50% 1/10W
R3320	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R3323	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3333	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R3334	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3335	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R3337	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R3338	1-216-103-00	METAL GLAZE 180K	5% 1/10W
R3339	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R3340	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R3344	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R3345	1-216-033-00	METAL GLAZE 220	5% 1/10W
R3346	1-216-025-91	METAL GLAZE 100	5% 1/10W
R3347	1-216-025-91	METAL GLAZE 100	5% 1/10W
R3348	1-216-025-91	METAL GLAZE 100	5% 1/10W
R3349	1-216-025-91	METAL GLAZE 100	5% 1/10W
R3350	1-216-117-00	METAL GLAZE 680K	5% 1/10W
R3351	1-216-115-00	METAL GLAZE 560K	5% 1/10W
R3353	1-216-111-91	METAL GLAZE 390K	5% 1/10W
R3355	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3356	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R3357	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R3358	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R3359	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R3360	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3361	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3362	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3363	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3364	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3365	1-216-099-00	METAL GLAZE 120K	5% 1/10W
R3366	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R3367	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R3368	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R3369	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3376	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R3377	1-216-107-00	METAL GLAZE 270K	5% 1/10W
R3378	1-216-121-91	METAL GLAZE 1M	5% 1/10W
R3379	1-216-107-00	METAL GLAZE 270K	5% 1/10W
R3381	1-216-041-00	METAL GLAZE 470	5% 1/10W
R3382	1-216-645-11	METAL CHIP 560	0.50% 1/10W
R3383	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R3384	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R3385	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R3386	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R3390	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R3394	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3395	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3396	1-216-041-00	METAL GLAZE 470	5% 1/10W
R3398	1-216-688-11	METAL CHIP 36K	0.50% 1/10W
R4401	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R4402	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R4404	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R4405	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R4407	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R4408	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R4409	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R4410	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
R4411	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R4412	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R4413	1-216-295-91	CONDUCTOR, CHIP	
R4414	1-216-295-91	CONDUCTOR, CHIP	
R4415	1-216-295-91	CONDUCTOR, CHIP	
R4416	1-216-295-91	CONDUCTOR, CHIP	
<VARIABLE RESISTOR>			
RV501	1-223-102-00	RES, ADJ, WIREWOUND 120	
<TRANSFORMER>			
T300	1-406-781-11	COIL	
T500	1-426-668-11	TRANSFORMER, FERRITE (HDT)	
T501	$\Delta$ 1-453-234-11	TRANSFORMER ASSY, FLYBACK	
T501	* 4-058-301-01	RING, SHORT	
T501	7-685-663-79	SCREW +BVTP 4X16 TYPE2 IT-3	
T502	1-413-059-00	TRANSFORMER, FERRITE (DFT)	
T503	1-460-017-11	TRANSFORMER	
<THERMISTOR>			
TH500	1-807-970-11	THERMISTOR	
<TEST PIN>			
TP300	* 1-535-877-22	CHIP, CHECKER	
TP301	* 1-535-877-22	CHIP, CHECKER	
TP305	* 1-535-877-22	CHIP, CHECKER	
TP306	* 1-535-877-22	CHIP, CHECKER	
TP307	* 1-535-877-22	CHIP, CHECKER	
TP311	* 1-535-877-22	CHIP, CHECKER	
TP312	* 1-535-877-22	CHIP, CHECKER	
TP401	* 1-535-877-22	CHIP, CHECKER	
TP402	* 1-535-877-22	CHIP, CHECKER	
TP403	* 1-535-877-22	CHIP, CHECKER	
TP501	* 1-535-877-22	CHIP, CHECKER	
TP502	* 1-535-877-22	CHIP, CHECKER	
TP503	* 1-535-877-22	CHIP, CHECKER	
TP504	* 1-535-877-22	CHIP, CHECKER	
<CRYSTAL>			
X101	1-579-175-11	VIBRATOR, CERAMIC	
X300	1-577-259-11	VIBRATOR, CRYSTAL	
X300	3-741-396-01	INSULATOR	
X301	1-527-722-00	VIBRATOR, CRYSTAL	
X301	3-741-396-01	INSULATOR	

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REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1316-302-A G BOARD, COMPLETE *****			
1-533-223-11	HOLDER, FUSE		
* 4-374-846-11	COVER, CAPACITOR, CAP TYPE		
4-382-854-11	SCREW (M3X10), P, SW (+)		
7-322-065-19	RUBBER, SILICON RTV (KE490W)		
<CAPACITOR>			
C602	1-130-711-00	FILM 0.22MF 20%	250V
C603	1-130-711-00	FILM 0.22MF 20%	250V
C604	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C605	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C606	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C607	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C608	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C609	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C610	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C611	1-113-924-11	CERAMIC 0.0047MF 20%	250V
C612	1-137-484-11	FILM 0.47MF 10%	630V
C613	1-137-484-11	FILM 0.47MF 10%	630V
C614	1-129-718-00	FILM 0.022MF 10%	630V
C615	1-136-619-11	FILM 0.0016MF 3%	2KV
C616	1-107-909-11	ELECT 47MF 20%	35V
C617	1-107-430-91	CERAMIC 0.0033MF 10%	1KV
C618	1-107-906-11	ELECT 10MF 20%	50V
C619	1-107-911-11	ELECT 220MF 20%	50V
C621	1-117-791-11	ELECT 1000MF 20%	160V
C622	1-102-038-00	CERAMIC 0.001MF	500V
C623	1-107-900-51	ELECT 4700MF 20%	35V
C624	1-102-038-00	CERAMIC 0.001MF	500V
C625	1-107-900-51	ELECT 4700MF 20%	35V
C626	1-102-038-00	CERAMIC 0.001MF	500V
C627	1-107-900-51	ELECT 4700MF 20%	35V
C628	1-102-038-00	CERAMIC 0.001MF	500V
C629	1-107-891-11	ELECT 3300MF 20%	25V
C630	1-126-964-11	ELECT 10MF 20%	50V
C631	1-136-853-11	FILM 0.56MF 5%	200V
C632	1-107-492-11	ELECT 47MF 20%	160V
C633	1-107-885-11	ELECT 3300MF 20%	16V
C634	1-107-911-11	ELECT 220MF 20%	50V
C636	1-107-909-11	ELECT 47MF 20%	50V
C637	1-107-910-11	ELECT 100MF 20%	50V
C638	1-137-484-11	FILM 0.47MF 10%	630V
C2601	1-102-038-00	CERAMIC 0.001MF	500V
<CONNECTOR>			
CN601	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN602	* 1-695-561-11	PIN, CONNECTOR (PC BOARD) 7P	
CN603	* 1-508-765-00	PIN, CONNECTOR (5mm PITCH) 3P	
CN605	* 1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
CN606	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN607	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN609	1-508-786-00	PIN, CONNECTOR (5mm PITCH) 2P	
<DIODE>			
D601	8-719-510-53	DIODE D4SB60L	
D605	8-719-979-85	DIODE EGP20G	
D606	8-719-988-55	DIODE RGP15K-6179	
D607	8-719-300-33	DIODE RU-3AM	
D608	8-719-911-19	DIODE 1SS119-25	
D609	8-719-300-33	DIODE RU-3AM	
D610	8-719-029-04	DIODE D5L60	
D612	8-719-045-48	DIODE FML-G12S	
D613	8-719-979-85	DIODE EGP20G	
D614	8-719-045-48	DIODE FML-G12S	
D615	8-719-979-85	DIODE EGP20G	

REF. NO.	PART NO.	DESCRIPTION	REMARK
D616	8-719-054-32	DIODE ERA15-06	
D617	8-719-110-44	DIODE RD16ESB1	
D618	8-719-979-85	DIODE EGP20G	
<FERRITE BEAD>			
FB601	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB602	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB606	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB607	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB608	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB609	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB610	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB611	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB612	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB613	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
<IC>			
IC601	4-058-250-01	SHEET, INSULATING	
IC601	8-749-925-03	IC STR-M6524	
IC602	8-749-010-47	IC STR-S3115	
IC603	8-759-701-56	IC NJM78M05FA	
IC604	8-759-231-53	IC TA7805S	
IC605	8-759-231-58	IC TA7812S	
<COIL>			
L601	1-411-215-11	COIL, CHOKE 200UH	
L1601	1-410-679-31	INDUCTOR 270UH	
L1602	1-421-421-00	COIL, CHOKE	
L2601	1-459-155-00	COIL (WITH CORE) 45UH	
<PHOTO COUPLER>			
PH601	8-749-923-50	PHOTO COUPLER PC111YS	
<TRANSISTOR>			
Q601	8-729-140-96	TRANSISTOR 2SD774-34	
Q603	8-729-303-61	TRANSISTOR 2SC3851-G	
<RESISTOR>			
R601	1-202-719-00	SOLID 1M	2% 1/2W
R602	1-216-491-11	METAL OXIDE 56K	5% 3W F
R603	1-216-490-11	METAL OXIDE 39K	5% 3W F
R604	1-249-418-11	CARBON 1.2K	5% 1/4W
R605	1-249-415-11	CARBON 680	5% 1/4W
R606	1-207-642-00	WIREWOUND 0.15	1% 3W F
R607	1-249-426-11	CARBON 5.6K	5% 1/4W
R608	1-249-428-11	CARBON 8.2K	5% 1/4W
R609	1-249-428-11	CARBON 8.2K	5% 1/4W
R610	1-249-428-11	CARBON 8.2K	5% 1/4W
R611	1-249-417-11	CARBON 1K	5% 1/4W F
R612	1-249-404-00	CARBON 82	5% 1/4W
R613	1-249-419-11	CARBON 1.5K	5% 1/4W
R614	1-249-385-11	CARBON 2.2	5% 1/4W F
R615	1-202-727-00	SOLID 4.7M	1% 1/2W
R617	1-202-933-61	FUSIBLE 0.1	1% 1/2W F
R618	1-202-933-61	FUSIBLE 0.1	1% 1/2W F
R619	1-202-933-61	FUSIBLE 0.1	1% 1/2W F
R620	1-202-933-61	FUSIBLE 0.1	1% 1/2W F
R621	1-215-877-11	METAL OXIDE 22K	5% 1W F
R622	1-249-401-11	CARBON 47	5% 1/4W F
R623	1-249-417-11	CARBON 1K	5% 1/4W
R626	1-247-895-91	CARBON 470K	5% 1/4W





REF. NO.	PART NO.	DESCRIPTION	REMARK			
R627	1-216-490-11	METAL OXIDE 39K	5%	3W	F	
R628	1-216-491-11	METAL OXIDE 56K	5%	3W	F	
R629	1-202-727-00	SOLID 4.7M	10%	1/2W		
R630	1-216-490-11	METAL OXIDE 39K	5%	3W	F	
R631	1-249-412-11	CARBON 390	5%	1/4W	F	
R632	1-249-401-11	CARBON 47	5%	1/4W	F	
R1602	1-202-842-11	SOLID 220K	20%	1/2W		
R1603	1-202-842-11	SOLID 220K	20%	1/2W		
<RELAY>						
RY601	1-515-738-11	RELAY				
<TRANSFORMER>						
T601	1-426-716-11	TRANSFORMER, LINE FILTER (LFT)				
T602	1-426-716-11	TRANSFORMER, LINE FILTER (LFT)				
T603	1-431-245-11	TRANSFORMER, CONVERTER (SRT)				
<THERMISTOR>						
THP601	1-808-059-31	THERMISTOR, POSITIVE				
<TEST PIN>						
TP1601	1-536-354-00	POST PIN				
<VARISTOR>						
VDR601	1-809-942-71	VARISTOR				
VDR602	1-809-942-71	VARISTOR				
*****						
* A-1331-628-A C BOARD, COMPLETE (PVM-20M4U/E/A)						
*****						
* A-1331-630-A C BOARD, COMPLETE (PVM-20M2U/E)						
*****						
7-682-949-01 SCREW +PSW 3X10						
<CAPACITOR>						
C701	1-102-116-00	CERAMIC 680PF	10%	50V		
C702	1-102-116-00	CERAMIC 680PF	10%	50V		
C703	1-102-116-00	CERAMIC 680PF	10%	50V		
C704	1-102-121-00	CERAMIC 0.0022MF	10%	50V		
C705	1-104-665-11	ELECT 100MF	20%	16V		
C706	1-102-074-00	CERAMIC 0.001MF	10%	50V		
C707	1-162-116-00	CERAMIC 680PF	10%	2KV		
C708	1-136-601-11	FILM 0.01MF	10%	630V		
C710	1-101-880-00	CERAMIC 47PF	5%	50V		
C711	1-101-880-00	CERAMIC 47PF	5%	50V		
C712	1-101-880-00	CERAMIC 47PF	5%	50V		
C714	1-102-976-00	CERAMIC 180PF	5%	50V		
C715	1-102-976-00	CERAMIC 180PF	5%	50V		
C716	1-102-976-00	CERAMIC 180PF	5%	50V		
C724	1-107-929-11	ELECT 10MF	20%	100V		
				(20M2U/E)		
C726	1-107-662-11	ELECT 22MF	20%	250V		
C733	1-107-652-11	ELECT 10MF	20%	250V		
C734	1-101-888-00	CERAMIC 68PF	5%	50V		
C737	1-102-934-00	CERAMIC 1PF	0.25PF	50V		
C740	1-162-114-00	CERAMIC 0.0047MF		2KV		
				(20M4U/E/A)		
<CONNECTOR>						
CN701	* 1-564-511-11	PLUG, CONNECTOR 8P				

REF. NO.	PART NO.	DESCRIPTION	REMARK			
CN702	* 1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P				
CN703	1-695-915-11	TAB (CONTACT)				
CN704	1-695-915-11	TAB (CONTACT) (20M4U/E/A)				
<DIODE>						
D701	8-719-911-19	DIODE 1SS119-25				
D702	8-719-911-19	DIODE 1SS119-25				
D703	8-719-911-19	DIODE 1SS119-25				
D704	8-719-911-19	DIODE 1SS119-25				
D705	8-719-911-19	DIODE 1SS119-25				
D706	8-719-911-19	DIODE 1SS119-25				
D707	8-719-901-83	DIODE 1SS83				
D708	8-719-901-83	DIODE 1SS83				
D709	8-719-901-83	DIODE 1SS83				
D713	8-719-901-83	DIODE 1SS83				
D715	8-719-901-83	DIODE 1SS83				
D716	8-719-901-83	DIODE 1SS83				
D717	8-719-901-83	DIODE 1SS83				
<JACK>						
J701	1-251-116-11	SOCKET, PICTURE TUBE (20M4U/E/A)				
J701	1-540-071-11	SOCKET, PICTURE TUBE (20M2U/E)				
<COIL>						
L702	1-408-413-00	INDUCTOR 22UH				
L703	1-408-608-31	INDUCTOR 27UH				
L704	1-408-608-31	INDUCTOR 27UH				
L705	1-412-530-31	INDUCTOR 27UH (20M2U/E)				
L705	1-412-532-11	INDUCTOR 39UH (20M4U/E/A)				
L706	1-410-667-31	INDUCTOR 22UH				
<TRANSISTOR>						
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q704	8-729-200-17	TRANSISTOR 2SA1091-O				
Q705	8-729-200-17	TRANSISTOR 2SA1091-O				
Q706	8-729-200-17	TRANSISTOR 2SA1091-O				
Q710	8-729-200-17	TRANSISTOR 2SA1091-O				
Q711	8-729-200-17	TRANSISTOR 2SA1091-O				
Q712	8-729-200-17	TRANSISTOR 2SA1091-O				
Q713	8-729-255-12	TRANSISTOR 2SC2551-O				
Q714	8-729-255-12	TRANSISTOR 2SC2551-O				
Q715	8-729-255-12	TRANSISTOR 2SC2551-O				
Q716	8-729-255-12	TRANSISTOR 2SC2551-O				
Q717	8-729-255-12	TRANSISTOR 2SC2551-O				
<RESISTOR>						
R702	1-247-897-11	CARBON 560K	5%	1/4W		
R704	1-215-404-00	METAL 200	1%	1/4W		
R705	1-215-404-00	METAL 200	1%	1/4W		
R706	1-215-404-00	METAL 200	1%	1/4W		
R707	1-249-429-11	CARBON 10K	5%	1/4W		
R708	1-249-429-11	CARBON 10K	5%	1/4W		
R709	1-249-429-11	CARBON 10K	5%	1/4W		
R710	1-215-388-00	METAL 43	1%	1/4W		
R711	1-215-390-00	METAL 51	1%	1/4W		
R712	1-215-388-00	METAL 43	1%	1/4W		
R715	1-202-818-00	SOLID 1K	20%	1/2W		
R716	1-216-486-00	METAL OXIDE 8.2K	5%	3W	F	
R717	1-202-818-00	SOLID 1K	20%	1/2W		
R718	1-216-486-00	METAL OXIDE 8.2K	5%	3W	F	
R719	1-202-818-00	SOLID 1K	20%	1/2W		
R720	1-216-486-00	METAL OXIDE 8.2K	5%	3W	F	
R722	1-202-883-11	SOLID 680K	20%	1/2W		



The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF. NO.	PART NO.	DESCRIPTION			REMARK
R723	1-202-838-00	SOLID	100K	20%	1/2W
R724	1-202-842-11	SOLID	220K	20%	1/2W
R725	1-202-838-00	SOLID	100K	20%	1/2W
R726	1-202-846-00	SOLID	470K	20%	1/2W
R728	1-202-837-00	SOLID	82K	20%	(20M2U/E) 1/2W
R729	1-202-549-00	SOLID	100	20%	(20M2U/E) 1/2W
R731	1-247-815-91	CARBON	220	5%	1/4W
R732	1-247-815-91	CARBON	220	5%	1/4W
R733	1-247-815-91	CARBON	220	5%	1/4W
R734	1-249-409-11	CARBON	220	5%	1/4W F
R735	1-249-409-11	CARBON	220	5%	1/4W F
R736	1-249-409-11	CARBON	220	5%	1/4W F
R737	1-247-807-31	CARBON	100	5%	1/4W
R738	1-247-807-31	CARBON	100	5%	1/4W
R739	1-247-807-31	CARBON	100	5%	1/4W
R740	1-249-433-11	CARBON	22K	5%	1/4W F
R741	1-249-433-11	CARBON	22K	5%	1/4W F
R742	1-249-433-11	CARBON	22K	5%	1/4W F
R744	1-247-843-11	CARBON	3.3K	5%	1/4W
R745	1-249-429-11	CARBON	10K	5%	1/4W
R746	1-215-879-11	METAL OXIDE	47K	5%	1W F
R747	1-247-725-11	CARBON	10K	5%	1/4W F
R748	1-249-923-11	CARBON	1K	5%	1/4W F
R749	1-215-902-11	METAL OXIDE	47K	5%	2W F
R751	1-247-887-00	CARBON	220K	5%	1/4W
R752	1-247-887-00	CARBON	220K	5%	1/4W
R753	1-247-887-00	CARBON	220K	5%	1/4W
R754	1-247-863-91	CARBON	22K	5%	1/4W
R755	1-249-434-11	CARBON	27K	5%	1/4W
R756	1-249-440-11	CARBON	82K	5%	1/4W
R760	1-249-400-11	CARBON	39	5%	1/4W F

#### <VARIABLE RESISTOR>

RV708	1-241-714-11	RES, ADJ, METAL FILM 110M
RV709	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M

#### <SPARK GAP>

SG701	1-519-422-11	GAP, SPARK (20M4U/E/A)
SG702	1-519-422-11	GAP, SPARK (20M4U/E/A)
SG703	1-519-422-11	GAP, SPARK (20M4U/E/A)
SG704	1-519-422-11	GAP, SPARK (20M4U/E/A)

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\* A-1372-302-A H BOARD, COMPLETE  
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\* 4-348-208-00 HOLDER, LED

#### <CONNECTOR>

CN105	* 1-564-527-11	PLUG, CONNECTOR 12P
CN106	* 1-564-526-11	PLUG, CONNECTOR 11P

#### <DIODE>

D2102	8-719-920-05	DIODE SLP281C-50
D2103	8-719-812-32	DIODE TLY123
D2104	8-719-991-33	DIODE ISS133T-77

#### <RESISTOR>

R2101	1-249-419-11	CARBON	1.5K	5%	1/4W
R2107	1-249-430-11	CARBON	12K	5%	1/4W
R2136	1-249-414-11	CARBON	560	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R2137	1-249-414-11	CARBON	560	5%	1/4W
R2138	1-249-414-11	CARBON	560	5%	1/4W
R2139	1-249-414-11	CARBON	560	5%	1/4W
R2140	1-249-414-11	CARBON	560	5%	1/4W
R2141	1-249-414-11	CARBON	560	5%	1/4W
R2142	1-249-414-11	CARBON	560	5%	1/4W
R2143	1-249-414-11	CARBON	560	5%	1/4W
R2144	1-249-414-11	CARBON	560	5%	1/4W
R2145	1-249-414-11	CARBON	560	5%	1/4W
R2147	1-215-427-00	METAL	1.8K	1%	1/4W
R2148	1-215-419-00	METAL	820	1%	1/4W
R2149	1-215-414-00	METAL	510	1%	1/4W
R2150	1-215-409-00	METAL	330	1%	1/4W
R2151	1-215-407-00	METAL	270	1%	1/4W
R2152	1-215-404-00	METAL	200	1%	1/4W
R2153	1-215-401-11	METAL	150	1%	1/4W
R2154	1-215-399-00	METAL	120	1%	1/4W
R2155	1-215-397-00	METAL	100	1%	1/4W
R2156	1-215-421-00	METAL	1K	1%	1/4W
R2157	1-215-416-00	METAL	620	1%	1/4W
R2158	1-215-410-00	METAL	360	1%	1/4W
R2159	1-215-405-00	METAL	220	1%	1/4W
R2160	1-215-421-00	METAL	1K	1%	1/4W

#### <VARIABLE RESISTOR>

RV2101	1-241-238-21	RES, VAR, CARBON 20K
RV2103	1-225-385-11	RES, VAR, CARBON 20K
RV2105	1-225-385-11	RES, VAR, CARBON 20K
RV2109	1-225-385-11	RES, VAR, CARBON 20K
RV2113	1-225-385-11	RES, VAR, CARBON 20K
RV2117	1-241-238-21	RES, VAR, CARBON 20K

#### <SWITCH>

S2101	1-570-101-41	SWITCH, KEY BOARD
S2102	1-570-101-41	SWITCH, KEY BOARD
S2103	1-570-101-41	SWITCH, KEY BOARD
S2104	1-570-101-41	SWITCH, KEY BOARD
S2105	1-570-101-41	SWITCH, KEY BOARD
S2106	1-570-969-11	SWITCH, KEY BOARD
S2107	1-570-969-11	SWITCH, KEY BOARD
S2108	1-570-101-41	SWITCH, KEY BOARD
S2109	1-570-101-41	SWITCH, KEY BOARD
S2110	1-570-101-41	SWITCH, KEY BOARD
S2111	1-570-101-41	SWITCH, KEY BOARD
S2112	1-570-101-41	SWITCH, KEY BOARD
S2113	1-570-969-11	SWITCH, KEY BOARD
S2114	1-570-969-11	SWITCH, KEY BOARD

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\* A-1388-193-A J BOARD, COMPLETE  
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#### <CONNECTOR>

CN608	* 1-695-561-11	PIN, CONNECTOR (PC BOARD) 7P
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#### <SWITCH>

S601	$\Delta$ 1-692-921-11	SWITCH, PUSH (A.C. POWER)
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Les composants identifiés par  
une trame et une marque  $\Delta$   
sont critiques pour la sécurité.  
Ne les remplacer que par une  
pièce portant le numéro spécifié.

The components identified by  
shading and mark  $\Delta$  are critical  
for safety.  
Replace only with part number  
specified.

REF. NO. PART NO. DESCRIPTION REMARK

\* A-1390-704-A X BOARD, COMPLETE  
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<CONNECTOR>

CN108 \* 1-564-518-11 PLUG, CONNECTOR 3P

<DIODE>

D001 8-719-023-78 DIODE SEL3810DLC05  
D002 8-719-023-78 DIODE SEL3810DLC05  
D003 8-719-023-78 DIODE SEL3810DLC05  
D004 8-719-023-78 DIODE SEL3810DLC05

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\* A-1390-705-A S BOARD, COMPLETE

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(PVM-20M2U/20M4U)

<CAPACITOR>

C805 1-102-978-00 CERAMIC 220PF 5% 50V  
C806 1-136-165-00 FILM 0.1MF 5% 50V  
C807 1-130-477-00 MYLAR 0.0033MF 5% 50V  
C810 1-136-165-00 FILM 0.1MF 5% 50V  
C811 1-136-165-00 FILM 0.1MF 5% 50V

C812 1-136-495-11 FILM 0.068MF 5% 50V  
C813 1-124-261-00 ELECT 10MF 20% 50V  
C818 1-136-165-00 FILM 0.1MF 5% 50V

<CONNECTOR>

CN801 \* 1-573-896-11 SOCKET, CONNECTOR 12P

<COIL>

L801 1-410-470-11 INDUCTOR 10UH

<RESISTOR>

R802 1-249-435-11 CARBON 33K 5% 1/4W  
R803 1-247-863-91 CARBON 22K 5% 1/4W  
R804 1-215-454-00 METAL 24K 1% 1/4W  
R805 1-215-461-00 METAL 47K 1% 1/4W  
R808 1-249-417-11 CARBON 1K 5% 1/4W

R812 1-249-417-11 CARBON 1K 5% 1/4W  
R813 1-249-417-11 CARBON 1K 5% 1/4W  
R815 1-247-843-11 CARBON 3.3K 5% 1/4W  
R816 1-249-418-11 CARBON 1.2K 5% 1/4W  
R817 1-249-418-11 CARBON 1.2K 5% 1/4W

R818 1-249-418-11 CARBON 1.2K 5% 1/4W  
R819 1-249-418-11 CARBON 1.2K 5% 1/4W  
R820 1-249-422-11 CARBON 2.7K 5% 1/4W

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1-537-735-14 TERMINAL BOARD ASSY, I/O (A)

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(Q BOARD)

2-990-241-02 HOLDER (A), PLUG  
3-178-213-21 SCREW +P 3X10  
7-685-135-19 SCREW +P 2.6X10 TYPE2 SLIT

<CAPACITOR>

C2401 1-163-111-00 CERAMIC CHIP 56PF 5% 50V  
C2402 1-104-396-11 ELECT 10MF 20% 16V  
C2403 1-104-396-11 ELECT 10MF 20% 16V

REF. NO. PART NO. DESCRIPTION REMARK

C2404 1-104-396-11 ELECT 10MF 20% 16V  
C2405 1-124-589-11 ELECT 47MF 20% 16V

C2406 1-104-396-11 ELECT 10MF 20% 16V  
C2407 1-104-396-11 ELECT 10MF 20% 16V  
C2408 1-104-396-11 ELECT 10MF 20% 16V  
C2409 1-124-234-00 ELECT 22MF 20% 16V  
C2410 1-163-033-91 CERAMIC CHIP 0.022MF 50V

C2411 1-104-396-11 ELECT 10MF 20% 16V  
C2412 1-104-396-11 ELECT 10MF 20% 16V  
C2413 1-163-117-00 CERAMIC CHIP 100PF 5% 50V  
C2414 1-126-301-11 ELECT 1MF 20% 50V  
C2415 1-165-319-11 CERAMIC CHIP 0.1MF 50V

C2416 1-124-589-11 ELECT 47MF 20% 16V  
C2418 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2422 1-124-234-00 ELECT 22MF 20% 16V  
C2423 1-124-234-00 ELECT 22MF 20% 16V  
C2424 1-163-033-91 CERAMIC CHIP 0.022MF 50V

C2425 1-124-589-11 ELECT 47MF 20% 16V  
C2426 1-124-589-11 ELECT 47MF 20% 16V  
C2427 1-124-234-00 ELECT 22MF 20% 16V  
C2428 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2429 1-124-234-00 ELECT 22MF 20% 16V

C2430 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2431 1-124-234-00 ELECT 22MF 20% 16V  
C2432 1-124-234-00 ELECT 22MF 20% 16V  
C2433 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2434 1-124-463-00 ELECT 0.1MF 20% 50V

C2435 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2436 1-124-234-00 ELECT 22MF 20% 16V  
C2437 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2438 1-124-234-00 ELECT 22MF 20% 16V  
C2439 1-124-234-00 ELECT 22MF 20% 16V

C2440 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2441 1-124-234-00 ELECT 22MF 20% 16V  
C2442 1-124-234-00 ELECT 22MF 20% 16V  
C2443 1-124-234-00 ELECT 22MF 20% 16V  
C2444 1-124-234-00 ELECT 22MF 20% 16V

C2445 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2446 1-163-033-91 CERAMIC CHIP 0.022MF 50V  
C2447 1-124-234-00 ELECT 22MF 20% 16V  
C2448 1-124-234-00 ELECT 22MF 20% 16V  
C2449 1-124-234-00 ELECT 22MF 20% 16V

C2450 1-124-234-00 ELECT 22MF 20% 16V  
C2451 1-124-589-11 ELECT 47MF 20% 16V  
C2452 1-124-589-11 ELECT 47MF 20% 16V  
C2454 1-126-163-11 ELECT 4.7MF 20% 25V  
C2461 1-165-319-11 CERAMIC CHIP 0.1MF 50V

C2462 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2463 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2464 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2465 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2466 1-165-319-11 CERAMIC CHIP 0.1MF 50V

C2467 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2468 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2469 1-165-319-11 CERAMIC CHIP 0.1MF 50V  
C2470 1-165-319-11 CERAMIC CHIP 0.1MF 50V

<CONNECTOR>

CN306 1-564-526-11 PLUG, CONNECTOR 11P  
CN307 1-564-522-11 PLUG, CONNECTOR 7P  
CN308 1-564-519-11 PLUG, CONNECTOR 4P  
CN2401  $\Delta$  1-251-263-11 INLET, AC  
CN2402 1-565-167-12 TERMINAL, (S) (WITH SW) 4P

CN2403 1-569-578-11 TERMINAL, S (WITH SW)  
CN2404 1-764-872-11 CONNECTOR, MULTI 20P





REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<DIODE>				JR41	1-216-295-91	CONDUCTOR, CHIP	
D2402	8-719-016-74	DIODE 1SS352		JR43	1-216-295-91	CONDUCTOR, CHIP	
D2404	8-719-800-76	DIODE 1SS226		JR46	1-216-295-91	CONDUCTOR, CHIP	
D2405	8-719-800-76	DIODE 1SS226		JR47	1-216-295-91	CONDUCTOR, CHIP	
D2406	8-719-800-76	DIODE 1SS226		JR48	1-216-295-91	CONDUCTOR, CHIP	
D2407	8-719-800-76	DIODE 1SS226		JR52	1-216-295-91	CONDUCTOR, CHIP	
D2408	8-719-800-76	DIODE 1SS226		JR60	1-216-295-91	CONDUCTOR, CHIP	
D2409	8-719-800-76	DIODE 1SS226		<TRANSISTOR>			
D2410	8-719-800-76	DIODE 1SS226		Q2401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D2411	8-719-800-76	DIODE 1SS226		Q2402	8-729-216-22	TRANSISTOR 2SA1162-G	
D2415	8-719-800-76	DIODE 1SS226		Q2403	8-729-216-22	TRANSISTOR 2SA1162-G	
D2416	8-719-800-76	DIODE 1SS226		Q2404	8-729-216-22	TRANSISTOR 2SA1162-G	
D2417	8-719-800-76	DIODE 1SS226		Q2405	8-729-216-22	TRANSISTOR 2SA1162-G	
D2418	8-719-800-76	DIODE 1SS226		Q2408	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D2420	8-719-037-53	DIODE RD27SB-T1		Q2409	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D2421	8-719-037-53	DIODE RD27SB-T1		Q2410	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D2422	8-719-037-53	DIODE RD27SB-T1		Q2411	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D2423	8-719-037-53	DIODE RD27SB-T1		Q2412	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
<IC>				Q2414	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC2401	8-759-509-71	IC XRU4021BF-E2		Q2415	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC2402	8-759-509-71	IC XRU4021BF-E2		Q2416	8-729-216-22	TRANSISTOR 2SA1162-G	
IC2403	8-759-287-89	IC MM1113XFF		Q2417	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC2404	8-759-084-76	IC MM1111XF		<RESISTOR>			
IC2405	8-759-287-89	IC MM1113XFF		R2401	1-216-073-00	METAL GLAZE 10K	5% 1/10W
<JACK>				R2402	1-216-043-91	METAL GLAZE 560	5% 1/10W
J2401	1-562-261-71	CONNECTOR, COAXIAL (BNC)		R2404	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2402	1-766-738-11	BNC (WITH SW)		R2405	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2403	1-562-261-71	CONNECTOR, COAXIAL (BNC)		R2406	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2404	1-766-738-11	BNC (WITH SW)		R2407	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2405	1-562-261-71	CONNECTOR, COAXIAL (BNC)		R2408	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2406	1-766-738-11	BNC (WITH SW)		R2409	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2407	1-562-261-71	CONNECTOR, COAXIAL (BNC)		R2410	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2408	1-766-738-11	BNC (WITH SW)		R2411	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2409	1-562-261-71	CONNECTOR, COAXIAL (BNC)		R2412	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2410	1-766-738-11	BNC (WITH SW)		R2413	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2411	1-562-261-71	CONNECTOR, COAXIAL (BNC)		R2414	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2412	1-766-738-11	BNC (WITH SW)		R2415	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2413	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2416	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2414	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2417	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2415	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2418	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2416	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2419	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2417	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2420	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2418	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2421	1-216-073-00	METAL GLAZE 10K	5% 1/10W
J2419	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2422	1-216-089-91	METAL GLAZE 47K	5% 1/10W
J2420	1-507-802-41	JACK, PIN (MOUNT TYPE)		R2423	1-216-073-00	METAL GLAZE 10K	5% 1/10W
<CHIP CONDUCTOR>				R2424	1-216-089-91	METAL GLAZE 47K	5% 1/10W
JR1	1-216-295-91	CONDUCTOR, CHIP		R2425	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR4	1-216-295-91	CONDUCTOR, CHIP		R2426	1-214-775-00	METAL 82K	1% 1/4W
JR5	1-216-295-91	CONDUCTOR, CHIP		R2427	1-216-097-91	METAL GLAZE 100K	5% 1/10W
JR7	1-216-295-91	CONDUCTOR, CHIP		R2428	1-216-105-91	METAL GLAZE 220K	5% 1/10W
JR12	1-216-295-91	CONDUCTOR, CHIP		R2429	1-216-025-91	METAL GLAZE 100	5% 1/10W
JR13	1-216-295-91	CONDUCTOR, CHIP		R2430	1-216-115-00	METAL GLAZE 560K	5% 1/10W
JR14	1-216-295-91	CONDUCTOR, CHIP		R2431	1-216-077-00	METAL GLAZE 15K	5% 1/10W
JR15	1-216-295-91	CONDUCTOR, CHIP		R2432	1-214-775-00	METAL 82K	1% 1/4W
JR16	1-216-295-91	CONDUCTOR, CHIP		R2433	1-216-097-91	METAL GLAZE 100K	5% 1/10W
JR17	1-216-295-91	CONDUCTOR, CHIP		R2434	1-216-105-91	METAL GLAZE 220K	5% 1/10W
JR19	1-216-295-91	CONDUCTOR, CHIP		R2435	1-216-025-91	METAL GLAZE 100	5% 1/10W
JR20	1-216-295-91	CONDUCTOR, CHIP		R2436	1-216-115-00	METAL GLAZE 560K	5% 1/10W
JR21	1-216-295-91	CONDUCTOR, CHIP		R2437	1-216-295-91	CONDUCTOR, CHIP	
JR23	1-216-295-91	CONDUCTOR, CHIP		R2438	1-216-077-00	METAL GLAZE 15K	5% 1/10W
JR30	1-216-295-91	CONDUCTOR, CHIP		R2439	1-214-775-00	METAL 82K	1% 1/4W
JR34	1-216-295-91	CONDUCTOR, CHIP		R2440	1-216-105-91	METAL GLAZE 220K	5% 1/10W
JR35	1-216-295-91	CONDUCTOR, CHIP		R2441	1-216-097-91	METAL GLAZE 100K	5% 1/10W
JR40	1-216-295-91	CONDUCTOR, CHIP		R2442	1-216-025-91	METAL GLAZE 100	5% 1/10W
				R2443	1-216-115-00	METAL GLAZE 560K	5% 1/10W
				R2444	1-216-077-00	METAL GLAZE 15K	5% 1/10W



**PVM-20M2U/20M4U**  
**PVM-20M2E/20M4E/20M4A**



Les composants identifiés par  
une trame et une marque  $\Delta$   
sont critiques pour la sécurité.  
Ne les remplacer que par une  
pièce portant le numéro spécifié.

The components identified by  
shading and mark  $\Delta$  are critical  
for safety.  
Replace only with part number  
specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
R2446	1-214-775-00	METAL 82K	1% 1/4W
R2447	1-216-105-91	METAL GLAZE 220K	5% 1/10W
R2448	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R2449	1-216-025-91	METAL GLAZE 100	5% 1/10W
R2450	1-216-115-00	METAL GLAZE 560K	5% 1/10W
R2451	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R2452	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R2453	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2455	2-216-113-00	METAL GLAZE 470K	5% 1/10W
R2458	1-216-295-91	CONDUCTOR, CHIP	
R2463	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R2465	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2466	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2467	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R2470	1-214-702-00	METAL 75	1% 1/4W
R2471	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R2472	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R2473	1-216-037-00	METAL GLAZE 330	5% 1/10W
R2474	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R2475	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R2476	1-214-702-00	METAL 75	10% 1/4W
R2477	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R2478	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R2479	1-216-027-00	METAL GLAZE 120	5% 1/10W
R2480	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R2481	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R2482	1-214-702-00	METAL 75	1% 1/4W
R2483	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R2484	1-216-027-00	METAL GLAZE 120	5% 1/10W
R2485	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R2486	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R2487	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R2488	1-214-702-00	METAL 75	1% 1/4W
R2489	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R2490	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R2491	1-216-027-00	METAL GLAZE 120	5% 1/10W
R2492	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R2493	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R2494	1-214-702-00	METAL 75	1% 1/4W
R2495	1-214-702-00	METAL 75	1% 1/4W
R2496	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R2497	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R2498	1-216-037-00	METAL GLAZE 330	5% 1/10W
R2499	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3400	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R3402	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R3404	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R3405	1-216-037-00	METAL GLAZE 330	5% 1/10W
R3406	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3408	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R3409	1-214-702-00	METAL 75	1% 1/4W
R3410	1-216-091-00	METAL GLAZE 56K	5% 1/10W
R3411	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W
R3412	1-216-037-00	METAL GLAZE 330	5% 1/10W
R3413	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3414	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3416	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3417	1-216-093-00	METAL GLAZE 68K	5% 1/10W
R3418	1-214-702-00	METAL 75	1% 1/4W
R3419	1-216-037-00	METAL GLAZE 330	5% 1/10W
R3420	1-216-023-00	METAL GLAZE 82	5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R3421	1-216-689-11	METAL GLAZE 39K	5% 1/10W
R3422	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3423	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R3424	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R3425	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R3426	1-216-099-00	METAL GLAZE 120	5% 1/10W
R3427	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3428	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3429	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3430	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3431	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R3432	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R3435	1-216-045-91	METAL GLAZE 680	5% 1/10W
R3436	1-216-045-91	METAL GLAZE 680	5% 1/10W
R3437	1-216-045-91	METAL GLAZE 680	5% 1/10W
R3438	1-216-045-91	METAL GLAZE 680	5% 1/10W
R3439	1-216-045-91	METAL GLAZE 680	5% 1/10W

<SWITCH>

S2401 1-570-598-11 SWITCH, DIP

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**MISCELLANEOUS**

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$\Delta$  1-223-417-12 RESISTOR ASSY (HIGH-VOLTAGE)

(20M4U/E/A)

$\Delta$  1-238-368-11 RESISTOR ASSY, HIGH-VOLTAGE

(20M2U/E)

$\Delta$  1-411-657-11 COIL, LANDING CORRECTION

(20M4U/E/A)

$\Delta$  1-426-505-11 COIL, DEMAGNETIZATION

$\Delta$  1-451-349-11 DEFLECTION YOKE (Y20FZA) (20M2U/E)

$\Delta$  1-451-456-11 DEFLECTION YOKE (Y20MTA)

(20M4U/E/A)

1-452-032-00 MAGNET, DISK ; 10mm $\phi$

1-452-094-00 MAGNET, ROTATABLE DISK ; 15mm $\phi$

1-544-063-12 SPEAKER

$\Delta$  1-576-231-11 FUSE (H.B.C.) 4A/250V

$\Delta$  1-590-910-11 CORD SET, POWER (20M2E, 20M4E/A)

1-765-268-11 CORD, CONNECTION

$\Delta$  1-765-718-11 CORD SET, POWER (20M2U/20M4U)

$\Delta$  8-453-003-41 NA3012-M4 (20M4U/E/A)

$\Delta$  8-736-135-05 PICTURE TUBE 20FZ5(DARK) (20M2U/E)

$\Delta$  8-736-379-05 PICTURE TUBE 20MT1 (PVM)(20M2E/A)

$\Delta$  8-736-381-05 PICTURE TUBE 20MT3 (PVM) (20M4U)

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**ACCESSORIES AND PACKING MATERIALS**

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3-170-078-01 HOLDER (B), PLUG

3-859-663-12 MANUAL, INSTRUCTION  
(20M2E/20M4E only)

3-859-663-22 MANUAL, INSTRUCTION

\* 4-043-769-01 CUSHION (UPPER) (ASSY)

\* 4-043-770-01 CUSHION (LOWER) (ASSY)

4-044-040-03 LABEL, TALLY

\* 4-058-819-01 INDIVIDUAL CARTON

\* 4-381-155-01 BAG, PROTECTION

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